

THE DOCUMENT COMPANY
XEROX

WorkCentre XD Series

Copier/Printer

Service Documentation

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CAUTION

Certain components in the WorkCentre XD Series Copier/Printer are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

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How to Identify and Resolve Radio-TV Interference Problems

Stock number: 004-000-00345-4

This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402

WARNING

Use of controls or adjustments other than those specified in this documentation may result in an exposure to dangerous laser radiation. The WorkCentre XD Series Copier/Printer is certified to comply with Laser Product Performance Standards set by the US Department of Health and Human Services as a Class 1 product. This means that it is a laser product that does not emit laser radiation during any mode of customer operation. During servicing, the laser beam could cause eye damage if looked at directly. The service procedures must be followed exactly as written.

The laser warning symbol is repeated in specific service procedures where laser light exposure is possible.



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About This Manual

This manual is part of a documentation system which also includes training.

This manual contains Repair Analysis Procedures, Repair Procedures, Adjustment Procedures, Parts List, Diagnostic Procedures, and Wiring Data information that will enable a Service Representative to repair the WorkCentre XD100/XD102/XD104 Family of copier/printers.

Organization

This manual is divided into seven sections. The title and description of each section is listed below.

A Publication Comment Sheet is provided at the end of this manual.

Section 1 - SERVICE CALL PROCEDURES

This section contains the following:

Initial Actions/System Checks

System Checkout

Final Action

Initial Actions/System Checks

This identifies how to collect the data necessary to decide how to proceed with the service call. It classifies the problem and refers you to the appropriate Repair Analysis Procedure.

System Checkout

The System Checkout procedure is used to verify that the copier is operating properly after a repair has been made.

Final Action

The Final Action procedure identifies the steps that must be performed before closing out the service call.

Section 2 - REPAIR ANALYSIS PROCEDURES (RAPs)

This section contains the Repair Analysis Procedures (RAPs) necessary to repair faults. When using a RAP, always exit the procedure when the fault is fixed. Do not perform the remaining steps.

Section 3 - IMAGE QUALITY REPAIR ANALYSIS PROCEDURES (RAPs)

This section contains the Repair Analysis Procedures (RAPs) necessary to repair copy quality faults. The first RAP, CQ1 Copy Defect Entry Procedure, is used to classify a copy quality problem and will reference the RAP to be used to repair the problem. When using a RAP, exit the procedure when the fault is fixed. Do not perform the remaining steps.

Section 4 - REPAIR/ADJUSTMENT PROCEDURES

This section contains the repair and adjustment procedures for the XD100/XD102/XD104 Family of copiers.

Section 5 - PARTS LIST

This section contains the detailed Parts List for the XD100/XD102/XD104 Family of copiers.

Section 6 - GENERAL PROCEDURES/ GENERAL INFORMATION

This section contains Diagnostic Procedures, Installation and Removal Procedures, and General Information which includes Product Specifications for the XD100/XD102/XD104 Family of copiers.

Section 7 - WIRING DATA

This section contains Plug/Jack Location Drawings and BSDs.

How to Use This Manual

Introduction

The Service Call Procedures will direct you to the proper section of the Service Manual.

You should begin the service call with the Initial Actions/System Checks Procedure. From there, you will be referred to either Section 2, Status Indicator RAPs or Section 3, Image Quality RAPs.

If you are sent to Section 3, you will perform the CQ1 Copy Defect Entry Procedure to classify the copy quality problem. You will then be directed to the proper RAP to begin your troubleshooting. From these RAPs you may be referred to other sections of the manual to make checks, adjustments, or to replace parts.

When you have made a repair, return to the System Checkout/Final Action to complete the call.

Other Information

The Use of Caution, Warning, and Note statements

Information relative to the completion of a task in a safe or thorough manner will be supplied in the form of a Caution, a Warning, or a Note statement. These statements are found throughout the service documentation.

Cautions, Warnings, and Note statements appear before the steps to which they apply. These statements should be read before continuing to the next step in a procedure.

The definition of a Caution, Warning, or Note is as follows:

Caution - A Caution statement indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to or destruction of equipment.

Warning - A Warning statement indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in personal injury or loss of life.

Note - A Note statement indicates an operating or maintenance problem, practice, or condition that is necessary to accomplish a task efficiently.

The Use of Acronyms, Abbreviations, Specific or Unique Terms, and Conventions

A list of acronyms and abbreviations used in this service documentation is located in the table below. Table 1

Table 1 General Acronyms

Acronym	Definition
AC	Alternating Current
ACH	Alternating Current High
ACN	Alternating Current Neutral
AMP	Ampere
BSD	Block Schematic Diagram
BTU	British Thermal Unit
CD	Circuit Diagram
IQ/CQ	Image Quality/Copy Quality
DC	Direct Current
ESD	Electrostatic Discharge
HFSI	High Frequency Service Item
LED	Light Emitting Diode
PL	Parts List
PWB	Printed Wiring Board
RAP	Repair Analysis Procedure
VAC	Volts Alternating Current
VDC	Volts Direct Current

Specific Terms

Test Pattern 82P524 (USCO & XCL) and 82P523 (XL) will be referred to in this documentation as the Standard Test Pattern.

The Density Output Reference Guide, 82P520, and the Copy/Image Quality Rating Guide, 82P284, will also be referred to in this documentation.

The terms "dry ink" and "toner" are interchangeable.

Conventions

The conventions that are used in this service documentation are presented in the table below. Table 2

Table 2 Conventions

[nn-nn]	Hyphenated numbers enclosed in brackets indicate a diagnostic code to be used
E7-[nn]	When a Status Code has more than one sub-code, the subcode will appear in brackets.
bolding	When used in a sentence beginning with "Press the", any bolded numbers or words will represent an actual keypad button on the Control Console.

Reference Symbology

Reference Symbols

The reference symbols (icons) used in this documentation denote supportive data which can be found in other sections of this documentation. The purpose of these symbols is to inform the Service Representative of procedures, adjustments, or other information that is important for successful diagnosis and repair.

Schematic Symbols

These symbols represent electrical and mechanical components or devices that are commonly found in Xerox equipment. These symbols are included as an aid to understanding the representations used in the Circuit Diagrams (CDs).

AC and DC Voltage References

The expected AC and DC voltage levels found in this machine are defined in this section. These specifications represent the expected range for AC (machine input power source) and DC (machine internal power supplies) voltages that are encountered during normal operation.

Abbreviations

The table below lists the electrical wire colors that are identified in this service documentation and reflects the use of standardized abbreviations. Table 1

Table 1 Wire Color Abbreviations

Abbreviation	Wire Color
BLK	black
BLU	blue
BRN	brown
GRAY	gray
GRN	green
G/Y	green/yellow
ORN	orange
PINK	pink
RED	red
VIO	violet
WHT	white
YEL	yellow
Y/G	yellow/green

REFERENCE SYMOLOGY

Notes, adjustments, and parts lists support the checklists and the RAP information. The symbols that refer to this supportive data are shown below.

Note



This symbol is used to refer to notes found on the same page.

Adjustments



ADJ 4.1 This symbol refers to an adjustment procedure located in Section 4 of this Service Documentation. The number adjacent to the symbol indicates the number that is assigned to that adjustment

Parts List

PL 10.6

[PL 10.6] refers to the parts list located in section 5 of the Service Manual. The number after the PL designation indicates the number that is assigned to that parts list.

Switches and Relay Contacts



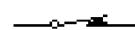
Safety interlock switch that is open.



Safety interlock switch that is closed.



Switch or relay contacts with momentary contacts shown normally open.



Switch or relay contacts with momentary contacts shown normally closed.

Miscellaneous Symbols

Descriptions of all commonly used graphic symbols are included in order to help you in troubleshooting when performing the RAP's.

Standby Power Input



This symbol indicates the continuation of a standby power line that is interrupted in the vertical direction.

Feed Back



This symbol indicates a feedback signal.

Flag



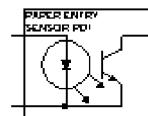
This symbol indicates an area of a Circuit Diagram that you should check.

Ground



This symbol indicates a machine ground.

LED/Phototransistor Sensor



This type of sensor is used in the document and paper path. It uses reflected light to switch the sensor off and on.

Without Tag Change



This symbol indicates that the area to which the triangle points has not been modified by the tag number in the circle.



This symbol indicates that the entire page has not been modified by the tag number in the circle.

With Tag Change



This symbol indicates that the area to which the triangle points has been modified by the tag number in the circle.



This symbol indicates that the entire page has been modified by the tag number in the circle.



WARNING

This symbol is used to warn of possible eye damage from a laser beam if service procedures are not followed exactly as written.



CAUTION

This symbol is used when components in the copier are susceptible to damage from electrostatic discharge. Observe ESD procedures to avoid component damage.



WARNING

A warning is used to alert the personnel to an operating or maintenance procedure, practice, or condition that, if not strictly observed could result in injury or loss of life.



CAUTION

A caution is used to alert the personnel to an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to, or destruction of equipment.

Signal Nomenclature

The signal is named to imply the condition of the machine when the signal is available. For example:

DOCUMENT JAM SENSED (L) +5 VDC

1. DOCUMENT JAM SENSED = Signal Name
2. (L) = Logic State when the signal is available in its named state. In this case the signal is Lo when a document jam is sensed.
3. +5 VDC = Logic level when the signal is Hi.

DC Voltage Levels

DC Voltages should be measured between the test point and the machine frame, unless instructed otherwise. Table 2

Table 2 DC Voltage Levels

Voltage	Specification
+3.3 VDC	+3.3 VDC +/- 10%
+5 VDC	+5 VDC +/- 10%
+12 VDC	+12 VDC +/- 5%
+24 VDC	+24 VDC +/- 5%

Logic Voltage Levels

Measurements of logic levels must be made with reference to the specified ground point, unless some other point is referenced in a diagnostic procedure. Table 3

Table 3 Logic Voltage Levels

Nominal Voltage	Logic State	Actual Voltage Ranges
+5 VDC	H	+4.8 VDC to +5.2 VDC
	L	0.0 VDC to +1.0 VDC
+24 VDC	H	+22.0 VDC to +25.7 VDC
	L	0.0 VDC to +3.0 VDC

1 Service Call Procedures

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Introduction

Use the Service Call Procedures as a maintenance guide when performing service on the WorkCentre XD100/XD102/XD104 Family of copier/printers. The procedure has been designed to be used with the XD100/XD102/XD104 Family Service Documentation.

- **Copier Maintenance**

The maintenance/cleaning should be performed when the copier is being serviced.

- **Initial Actions/System Checks**

This diagram is designed to identify and classify the copier problem and to refer you to the appropriate RAP in order to repair the problem. When the problem has been repaired, perform the System Checkout/Final Action.

- **System Checkout/Final Actions**

This procedure should be completed at the end of every service call to ensure that the copy paper and the document are transported properly and to ensure that copy quality is within specification.

Copier Maintenance

Introduction

The following maintenance procedure should be performed when the copier/printer is serviced.

Procedure

- (Table 1): Clean the following parts every time the copier/printer is serviced.

Table 1

Description	Procedure
Transfer Corotron Wire	Clean the Transfer Corotron Wire using the Corotron Cleaner (see the User Guide).
Document Glass and SDF Document Glass	Clean using water or Xerox Lens and Mirror Cleaner and a lint-free Cloth.

- (Table 2): Perform the Total Copy Count Read procedure in Section 6. Clean the following parts when the total copy count reaches 120,000.

Table 2

Description	Procedure
Document Cover Cushion	Clean using Formula A on a lint-free cloth.
Optics Frame interior	Clean using Formula A on a lint-free cloth.
Mirrors 1, 2, and 3	Clean using Film Remover on a lint-free cloth.
Reflector	Clean using Lens and Mirror Cleaner on a lint-free cloth.
Exposure Lamp	Clean using Film Remover on a lint-free cloth
Lens	Clean using Film Remover on a lint-free cloth.
Focus Correction Lens (Laser Assembly)	Do not open the Laser Assembly. Gently remove dust or toner deposits from the exposed lens surface with a dry cotton swab.
Transport Roller (Tray 2 Paper Feed Assembly), Upper and Lower Registration Rollers, Exit Rollers	Clean using Film Remover on a lint-free cloth.
Thermistor	Clean using Film Remover on a lint-free cloth.
Thermostat	Clean using Film Remover on a lint-free cloth.

- (Table 2): Perform the Total Copy Count Read procedure in Section 6. Lubricate the following when the total copy count reaches 120,000.

Table 3

Description	Procedure
Mirror Base Rail	Apply a thin film of 70P95 Turbine Oil to the upper surface of the rail.
Heat Roll	Lubricate the gear with 8R983 Fuser Lube.
Pressure Roll	Apply 1-2 drops of 70P95 Turbine Oil to the ends of the Pressure Roll Shaft

Table 3

Description	Procedure
Bearings	Lubricate the bearings with 70P95 Turbine Oil.
Fuser Gear	Lubricate the Fuser Gear with 8R983 Fuser Lube.

- (Table 2): Perform the Total Copy Count Read procedure in Section 6. Replace the following parts at the intervals shown in the table.

Table 4

Description	Part Number	Copy Count	REP / PL
Ozone Filter	53N142	120,000	PL 1.1
SDF Retard Roller	22N977	120,000	REP 5.5
Exposure Lamp Carriage	62N139	120,000	REP 6.2
Lower Registration Roller	22N929	100,000	REP 8.13
Tray 2 Feed Roller	22N928	120,000	REP 8.25
Paper Feed Roller (Tray 1)	22N928	120,000	REP 8.6
Transfer Corotron Wire	600K15950	20,000	PL 7.3
Transfer/Detack Corotron Assembly	19N415	120,000	REP 9.2
Heat Roll	22E20870	120,000	REP 10.2
Pressure Roll	22N924	120,000	REP 10.3
Heat Rod	122N115 (120V) 122N133 (230V)	120,000	REP 10.8
Pressure Roll Stripper Fingers	33N169	120,000	PL 6.2
Stripper Finger (3)	7N695	120,000	REP 10.11

Initial Actions/System Checks

Initial Actions

1. QUESTION THE OPERATOR.
2. VERIFY, CLASSIFY, AND REPAIR THE PROBLEM
3. REFER TO CUSTOMIZING YOUR COPIER IN THE USER GUIDE AND RECORD THE CUSTOMER PROGRAMMABLE SETTINGS.

Status Indicators

- STATUS CODES
Go to Status Codes/Other Faults Listing
- OTHER STATUS INDICATORS
 - TONER CARTRIDGE LED ON
Go to Toner Cartridge LED On RAP
 - DRUM CARTRIDGE LED ON
Go to Drum Cartridge LED On RAP
 - DOCUMENT JAM LED IS ON
Go to Document Jam LED On RAP
 - SDF JAM LED IS ON
Go to SDF Jam LED RAP
 - SDF PRESENT LED WILL NOT COME ON
Go to SDF Jam LED RAP
 - SELECTED PAPER TRAY LED IS FLASHING
Go to Paper Tray Ready RAP

Copy Quality Problems

- Go to CQ1 Copy Defect Entry RAP in Section 3

Other Faults

- COPY COUNT DISPLAY IS BLANK
Go to 1.1 Power On RAP
- COPIER START PROBLEM
Go to 1.1 Power On RAP
- DEAD MACHINE
Go to 1.1 Power On RAP
- SELECTION/INDICATION PROBLEM
Go to 2.1 Selection/Indication RAP
- ALL OTHER PROBLEMS
Go to Section 2 contents

Status Codes/Other Faults Listing

Table 1 Status Codes Entry Chart

Status Code	Subcode	Description	Corrective Action
A1	-	SDF JAM PROBLEM The Main PWB sensed a jam in the SDF.	Go to A1/A2 Status Code RAP.
A2	-	SDF JAM PROBLEM The Main PWB sensed a jam in the SDF.	Go to A1/A2 Status Code RAP.
C1	-	FRONT OR SIDE DOOR OPEN The Main PWB sensed that either the Front or the Side Door was open.	Go to C1 Status Code RAP (Without SDF).
CH	-	TONER CARTRIDGE PROBLEM The Main PWB sensed that the Toner Cartridge was not present.	Go to CH Status Code RAP (Without SDF).
E2	-	PAPER JAM PROBLEM The Main PWB sensed that a paper jam exists within the paper path.	Go to E2 Status Code (Without SDF) RAP.
E7	03	LASER PROBLEM The Main PWB sensed that a problem exists with the Laser Assembly or its circuitry, or with the laser drive circuit.	Go to E7-[03] Status Code RAP (Without SDF).
E7	04	CCD WHITE LEVEL PROBLEM The Main PWB sensed that a problem exists with either the CCD drive circuit or the Exposure Lamp.	Go to E7-[04] Status Code RAP (Without SDF).
E7	05	CCD BLACK LEVEL PROBLEM The Main PWB sensed that a problem exists with the CCD drive circuit.	Go to E7-[05] Status Code RAP (Without SDF).
E7	12	SHADING CORRECTION PROBLEM The Main PWB sensed that the white value obtained when the calibration strip was scanned was incorrect.	Go to E7-[12] Status Code RAP (Without SDF).
E7	14	IMAGE PROCESSING PROBLEM The Main PWB sensed a communication problem between the CPU and the image processing (ASIC) chip.	Go to E7-[14] Status Code RAP.
E7	15	EXPOSURE LAMP PROBLEM The Main PWB sensed that a problem exists with the Exposure Lamp or its circuitry, or with the exposure lamp driver.	Go to E7-[15] Status Code (Without SDF) RAP.
H2	-	THERMISTOR PROBLEM The Main PWB sensed that the Thermistor RT1 was open.	Go to H2/H3 Status Code RAP (Without SDF).
H3	-	FUSER OVERHEAT PROBLEM The Main PWB sensed a Fuser overheat condition.	Go to H2/H3 Status Code RAP (Without SDF).

Table 1 Status Codes Entry Chart

Status Code	Subcode	Description	Corrective Action
H4	-	FUSER WARM-UP PROBLEM The Main PWB sensed that the Fuser did not reach 185° C within 27 seconds after power on or that the Fuser does not rise above 140° C for 6 seconds during the copy cycle.	Go to H4 Status Code RAP (Without SDF).
J1	-	TONER CARTRIDGE PROBLEM The Main PWB sensed that the Toner Cartridge is empty.	Go to J1 Status Code RAP (Without SDF).
J2	-	DRUM CARTRIDGE PROBLEM The Main PWB sensed that the Drum Cartridge has reached the end of its life.	Go to J2 Status Code RAP.
L1	-	SCAN PROBLEM The Main PWB sensed that the Exposure Lamp Carriage did not leave the home position after power up or after the Start button was pressed.	Go to L1/L3 Status Code Rap (Without SDF).
L3	-	SCAN RETURN PROBLEM The Main PWB sensed that the Exposure Lamp Carriage did not return home after power up or after the copy cycle.	Go to L1/L3 Status Code Rap (Without SDF).
L4	-	MAIN MOTOR PROBLEM The Main PWB sensed a Main Drive Motor MOT1 problem.	Go to L4 Status Code RAP (Without SDF).
L6	-	LASER PROBLEM The Main PWB sensed that the Laser Assembly polygon motor failed to achieve the correct operating speed after power up or after the Start button is pressed.	Go to L6 Status Code RAP (Without SDF).
P	-	PAPER FEED PROBLEM The Main PWB sensed that the selected paper tray is out of paper or that a misfeed has occurred.	Go to P Status Code RAP (Without SDF).
U2	01	MEMORY FAILURE The Main PWB sensed a memory failure.	Go to U2-[01] / U2-[04] Status Code RAP.
U2	04	MEMORY FAILURE The Main PWB sensed an access error.	Go to U2-[01] / U2-[04] Status Code RAP.

System Checkout/Final Action

Procedure

Make several copies of the 82P524 Test Pattern side A. (Include 78%, 86%, 129%, and 200%.) Use the alternate tray where applicable.

Copies are delivered to the output tray.

Y N

Refer to Initial Actions/System Checks to begin your repair.

Evaluate the copies using CQ1 Copy Defect Entry RAP.

Image quality is acceptable.

Y N

Go to the copy quality RAP identified by the CQ1 Copy Defect Entry RAP.

Clean the exterior of the machine and provide copy samples of the customers originals.

2 STATUS INDICATOR RAPS

Notes:.....	3	8.1 Paper Tray Ready RAP.....	66
A1/A2 Status Code RAP	4		
CH Status Code RAP (Without SDF)	6		
CH Status Code RAP (With SDF)	6		
C1 Status Code RAP (Without SDF).....	7		
C1 Status Code RAP (With SDF).....	7		
E2 Status Code (Without SDF) RAP	8		
E2 Status Code RAP (With SDF).....	10		
E7-[03] Status Code RAP (Without SDF).....	12		
E7-[03] Status Code RAP (With SDF).....	12		
E7-[04] Status Code RAP (Without SDF).....	13		
E7-[04] Status Code RAP (With SDF).....	13		
E7-[05] Status Code RAP (Without SDF).....	14		
E7-[05] Status Code RAP (With SDF).....	14		
E7-[12] Status Code RAP (Without SDF).....	15		
E7-[12] Status Code RAP (With SDF).....	15		
E7-[14] Status Code RAP	16		
E7-[15] Status Code (Without SDF) RAP	16		
E7-[15] Status Code RAP (With SDF).....	17		
H2/H3 Status Code RAP (Without SDF)	18		
H2/H3 Status Code RAP (With SDF)	20		
H4 Status Code RAP (Without SDF).....	22		
H4 Status Code RAP (With SDF).....	24		
J1 Status Code RAP (Without SDF)	26		
J1 Status Code RAP (With SDF)	28		
J2 Status Code RAP	30		
L1/L3 Status Code Rap (Without SDF)	32		
L1/L3 Status Code RAP (With SDF)	34		
L4 Status Code RAP (Without SDF)	36		
L4 Status Code RAP (With SDF)	37		
L6 Status Code RAP (Without SDF)	38		
L6 Status Code RAP (With SDF)	38		
P Status Code RAP (Without SDF)	40		
P Status Code RAP (With SDF)	42		
U2-[01] / U2-[04] Status Code RAP	44		
Drum Cartridge LED On RAP	44		
Toner Cartridge LED On RAP	45		
1.1 Power ON RAP (Without SDF)	46		
1.1 Power On RAP (With SDF)	48		
1.2 DC Power RAP (Without SDF)	50		
1.2 DC Power (With SDF)	52		
2.1 Selection/Indication RAP (without SDF).....	54		
2.1 Selection/Indication RAP (with SDF).....	56		
2.2 Selection RAP (Without SDF)	58		
2.2 Selection RAP (With SDF)	60		
4.1 Ventilation Fan Motor RAP (Without SDF).....	62		
4.1 Ventilation Fan Motor RAP (With SDF).....	63		
5.1 SDF JAM LED RAP	64		

Notes:

A1/A2 Status Code RAP

A1, indicates the Main PWB sensed an SDF jam. (The last document should be fed again.)

A2, indicates the Main PWB sensed an SDF jam. (the last 2 documents should be fed again,)

Procedure

Clear the document jam. Open and close the SDF Feed Assembly. Press the **C** button. **The jam can be cleared.**

Y N

The SDF Jam LED is flashing.

Y N

Enter the diagnostic code [2-2]. Open and then close the SDF Feed Assembly.

The SDF Misfeed Indicator comes on and goes off.

Y N

Go to Flag 1 and check the wires for an open or short circuit. If the wires are good replace the SDF Sensor PWB PL 9.2.

Go to Flag 1 and check the wires for an intermittent condition. If the problem still exists replace the Main PWB PL 7.1.

Go to Flag 2 and check the wires for an open or short circuit. If the wires are good, replace the SDF Document Path Sensor Q3 PL 9.3.

Place a document in the SDF tray. Press the **Start** button. **The document is fed into the document path.**

Y N

Enter the diagnostic code [2-3]. **The SDF Drive Motor comes on.**

Y N

Go to Flag 3 and check the wires for an open circuit. If the wires are good, replace the SDF Drive Motor PL

Enter the diagnostic code [2-4]. **The SDF Feed Solenoid cycles on and off.**

Y N

Go to Flag 4 and check the wires for an open or short circuit. If the wires are good, replace the SDF Feed Solenoid SOL1, PL 9.2.

Switch off the power. Remove the SDF Rear Cover and check the SDF Drive Motor and drive components for wear and or damage. **The Motor and drive components are good.**

Y N

Replace the defective components PL 9.3.

Check the following for wear and or damage PL 9.3.

- Feed solenoid linkage
- Feed and Retard rolls
- Feed Clutch and drive

The document stops before the Exit roller.

Y N

Clean and check the document path for obstructions.

A

Clean and or check for the following:

1. Obstructions in the paper path
2. Exit Drive Belt, PL9.3
3. Transport Roller, PL 9.3
4. Exit roller, PL 9.3

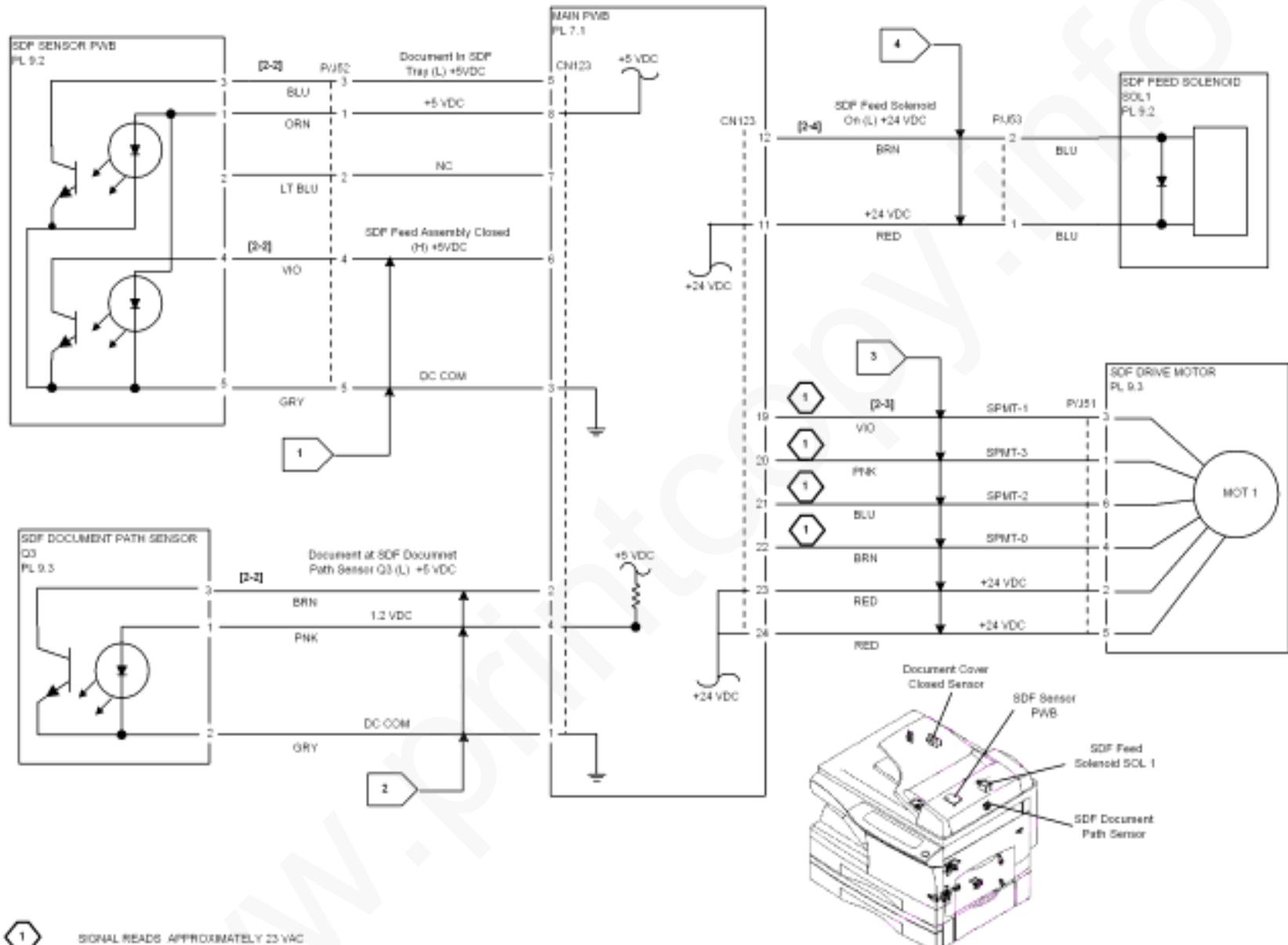


Figure 1 A1/A2 Status Code

CH Status Code RAP (Without SDF)

The Main PWB sensed that the Toner Cartridge is not present or fully seated.

Initial Actions

Ensure that the 2 locating pins on the rear of the toner cartridge are not broken.

Remove and reinstall the Toner Cartridge. If problem still exists, go to Flag 1 and check for a short circuit. If problem still exists, replace the Main PWB PL 7.1.

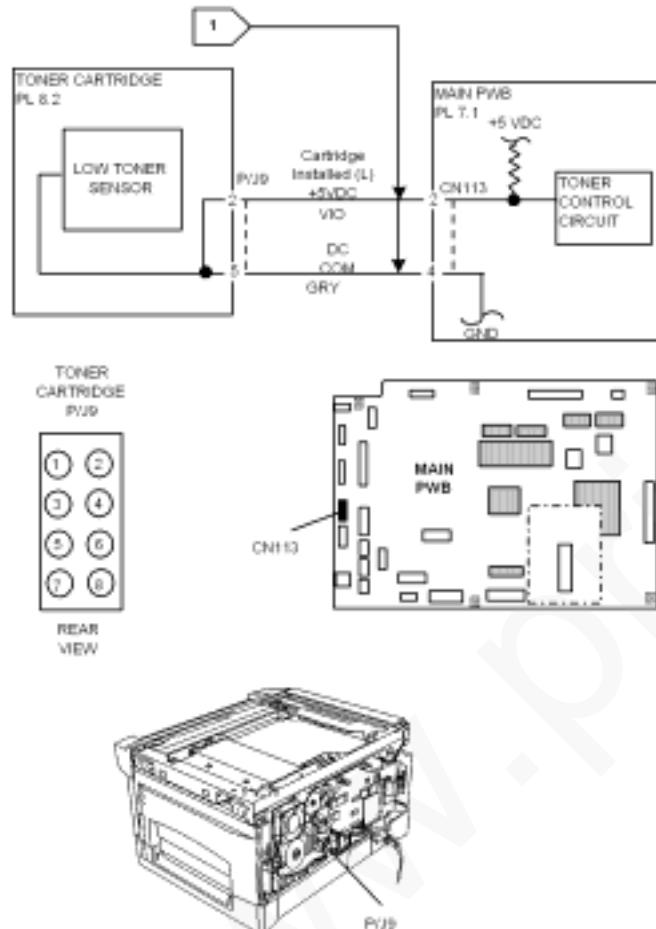


Figure 1 Toner Cartridge Installed (Without SDF)

CH Status Code RAP (With SDF)

The Main PWB sensed that the Toner Cartridge is not present or fully seated.

Initial Actions

Ensure that the 2 locating pins on the rear of the toner cartridge are not broken.

Remove and reinstall the Toner Cartridge. If problem still exists, go to Flag 1 and check for a short circuit. If problem still exists, replace the Main PWB PL 7.1.

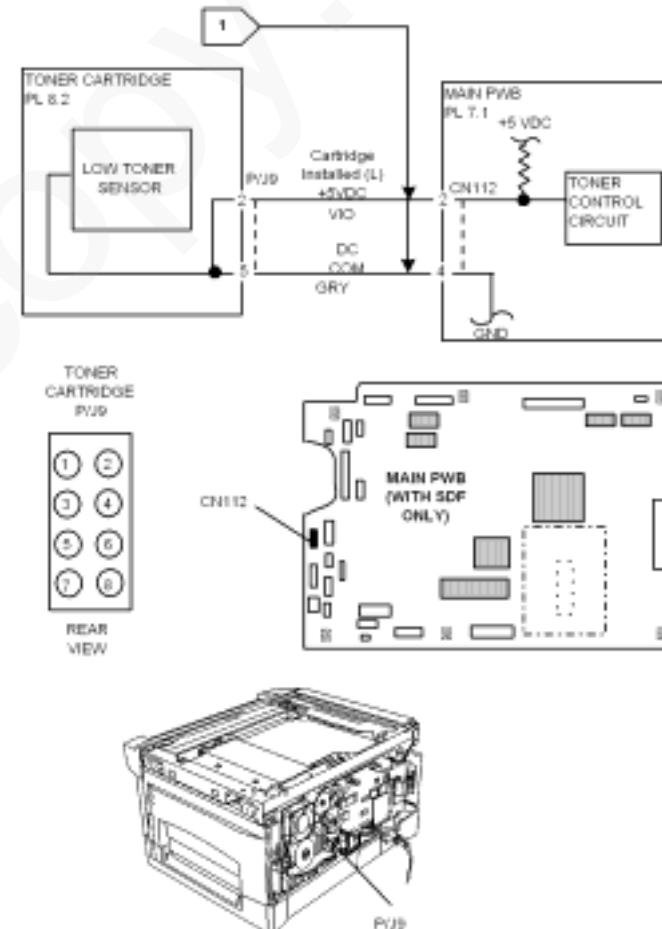


Figure 1 Toner Cartridge Installed (With SDF)

C1 Status Code RAP (Without SDF)

The Main PWB sensed that the Side Door is open.

Procedure

Ensure that the Side Door is closed securely. **There is +24 VDC measured at CN107-2 on the Main PWB to GND.**

Y N
There is +24 VDC measured at CN107-1 to GND.

Y N
Replace the Main PWB PL 7.1.

Go to Flag 1 and check the wires for an open circuit. If the check is good replace the Side Door Detector Switch Assembly PL 5.3.

Replace the Main PWB PL 7.1.

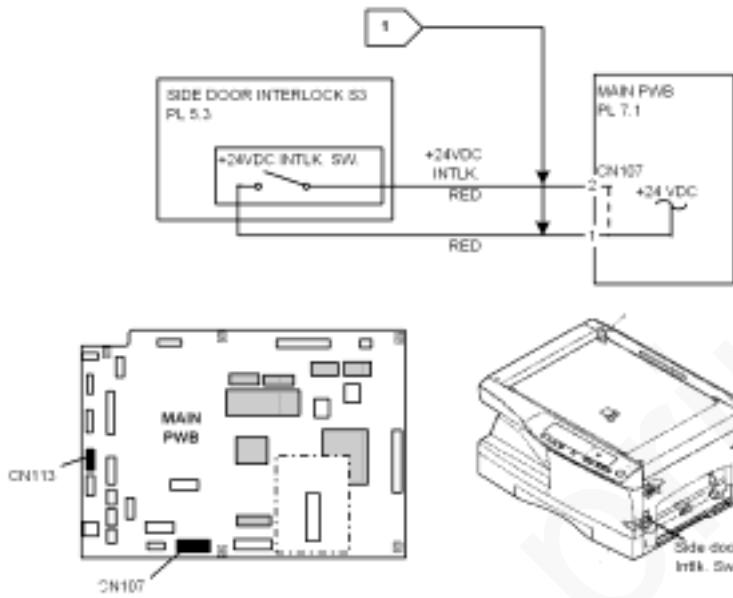


Figure 1 +24 VDC Interlock Ckt. (Without SDF)

C1 Status Code RAP (With SDF)

The Main PWB sensed that the Side Door is open.

Procedure

Ensure that the Side Door is closed securely. **There is +24 VDC measured at CN103-2 on the Main PWB to GND.**

Y N
There is +24 VDC measured at CN103-1 to GND.

Y N
Replace the Main PWB PL 7.1.

Go to Flag 1 and check the wires for an open circuit. If the check is good replace the Side Door Detector Switch Assembly PL 5.3.

Replace the Main PWB PL 7.1.

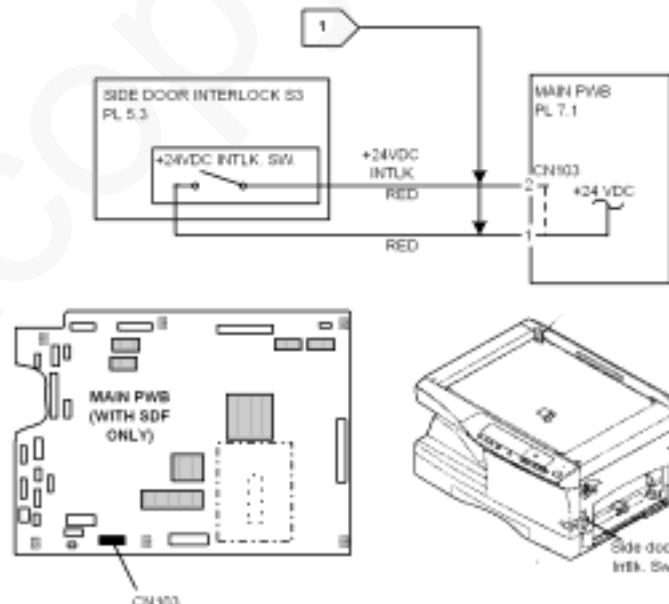


Figure 1 +24 VDC Interlock Ckt. (With SDF)

E2 Status Code (Without SDF) RAP

The Main PWB sensed a tray misfeed or a paper jam in the paper path.

Initial Actions

- Switch off the power and clear any document jam.
- Check for any obstructions in the paper path.

Procedure

Switch on the power. Enter diagnostic code 30-1.

Open then close the Fuser Gate to actuate and deactivate the Fuser Jam Sensor Q3 while observing the Paper Jam lamp. **The Paper Jam lamp comes on and goes off.**

Y N

Go to Flag 2 and check the wires for an open or short circuit.

Manually actuate and deactivate the Paper Feed Sensor Q1 while observing the Toner Cartridge lamp.

The Toner Cartridge lamp comes on and goes off.

Y N

Go to Flag 1 and check for an open circuit.

Place a piece of paper above the Fuser Gate and use the Manual Exit Knob move the paper across the Exit Sensor Q4 while observing the Drum Cartridge Lamp.

The Drum Cartridge lamp turns on and off.

Y N

Go to Flag 3 and check for an open wire.

Manually actuate and deactivate Bypass Feed Sensor Q2 while observing the **Auto** exposure lamp.

The Auto exposure LED comes on and goes off.

Y N

Go to Flag 4 and check for an open circuit.

Press the Clear button. Enter diagnostic code 6-2. Press the Start button. **The Registration Roll Solenoid can be heard switching on and switching off.**

Y N

Press the Clear button. **There is +24 VDC measured between CN103-1 and GND.**

Y N

Replace the Main PWB PL 7.1.

Go to Flag 5 and check the wires for an open circuit. If the wires are good, replace the Registration Roll Solenoid SOL3.

Press the **Stop** button. **Paper jams in the fuser.**

Y N

Check the following:

- Ensure that the paper tray guide is set to the correct width of the copy paper.
- Inspect the paper path from this tray and the paper registration area for an obstruction such as a burr.
- Inspect the Registration Roll, PL 5.1 and the Pinch Roll, PL 1.4 for contamination and wear. Clean (with Film Remover only) or replace as required.

A

- Check the condition of the Registration Pinch Roll Springs, PL 1.4 to ensure that they are applying even tension.

Check the following:

- A deformed Pressure Roller.
- An obstruction in the Fuser.
- A binding Registration Solenoid.
- A broken Fuser Drive Gear.

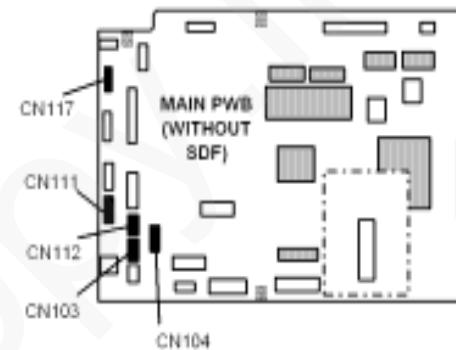


Figure 1 Main PWB (Without SDF)

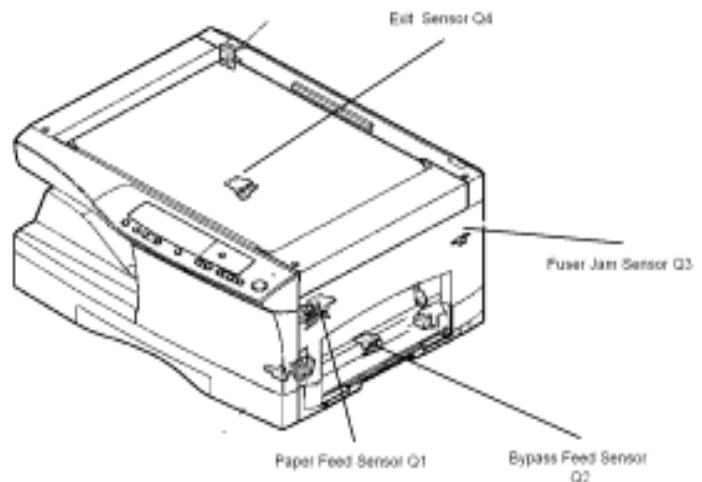
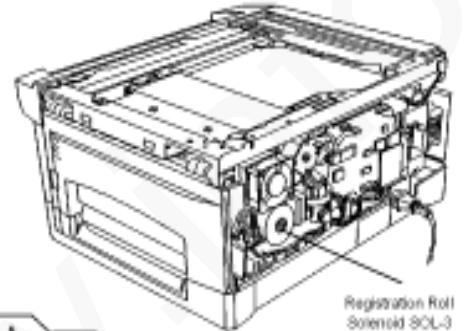
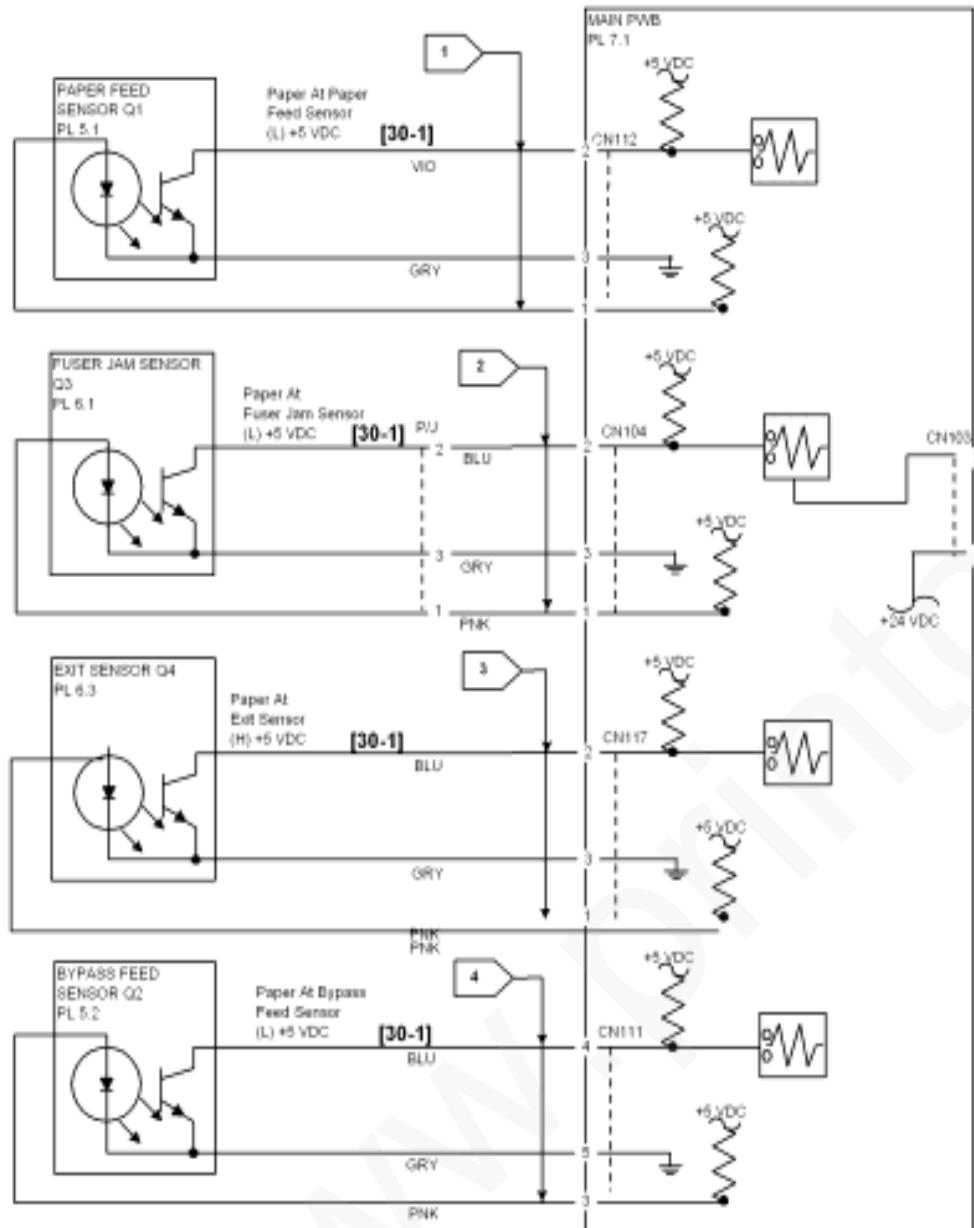


Figure 2 E2 Status Code (Without SDF)

E2 Status Code RAP (With SDF)

The Main PWB sensed a tray misfeed or a paper jam in the paper path.

Initial Actions

- Switch off the power and clear any document jam.
- Check for any obstructions in the paper path.

Procedure

Switch on the power. Enter diagnostic code 30-1.

Open then close the Fuser Gate to actuate and deactivate the Fuser Jam Sensor Q3 while observing the Paper Jam lamp. **The Paper Jam lamp comes on and goes off.**

Y N

Go to Flag 2 and check the wires for an open or short circuit.

Manually actuate and deactivate the Paper Feed Sensor Q1 while observing the Toner Cartridge lamp.

The Toner Cartridge lamp comes on and goes off.

Y N

Go to Flag 1 and check for an open circuit.

Place a piece of paper above the Fuser Gate and use the Manual Exit Knob move the paper across the Exit Sensor Q4 while observing the Drum Cartridge Lamp.

The Drum Cartridge lamp turns on and off.

Y N

Go to Flag 3 and check for an open wire.

Manually actuate and deactivate Bypass Feed Sensor Q2 while observing the **Auto** exposure lamp.

The Auto exposure LED comes on and goes off.

Y N

Go to Flag 4 and check for an open circuit.

Press the Clear button. Enter diagnostic code 6-2. Press the Start button. **The Registration Roll Solenoid can be heard switching on and switching off.**

Y N

Press the Clear button. **There is +24 VDC measured between CN107-1 and GND.**

Y N

Replace the Main PWB PL 7.1.

Go to Flag 5 and check the wires for an open circuit. If the wires are good, replace the Registration Roll Solenoid SOL3.

Press the **Stop** button. **Paper jams in the fuser.**

Y N

Check the following:

- Ensure that the paper tray guide is set to the correct width of the copy paper.
- Inspect the paper path from this tray and the paper registration area for an obstruction such as a burr.
- Inspect the Registration Roll, PL 5.1 and the Pinch Roll, PL 1.4 for contamination and wear. Clean (with Film Remover only) or replace as required.

A

- Check the condition of the Registration Pinch Roll Springs, PL 1.4 to ensure that they are applying even tension.

Check the following:

- A deformed Pressure Roller.
- An obstruction in the Fuser.
- A binding Registration Solenoid.
- A broken Fuser Drive Gear.

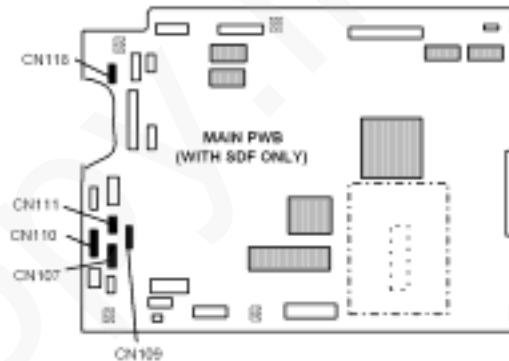


Figure 1 Main PWB (With SDF)

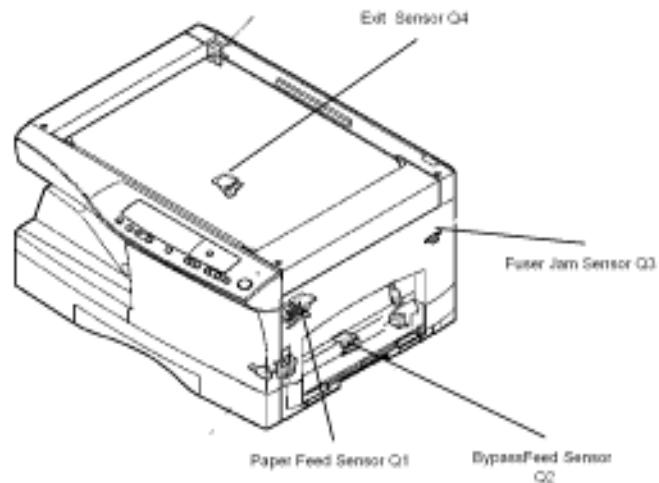
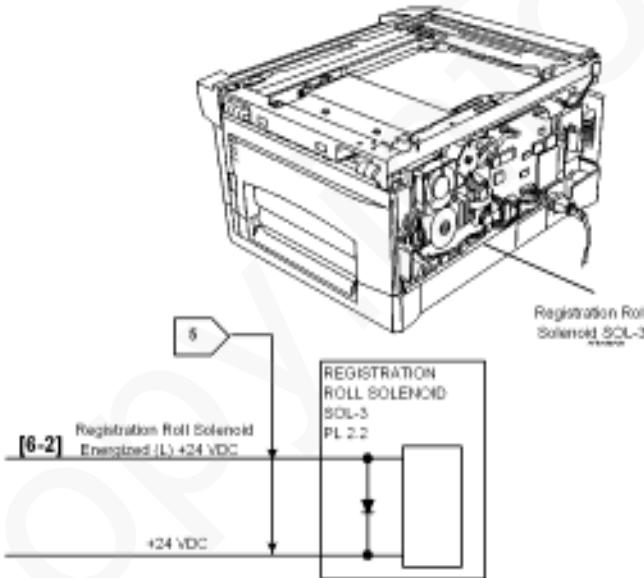
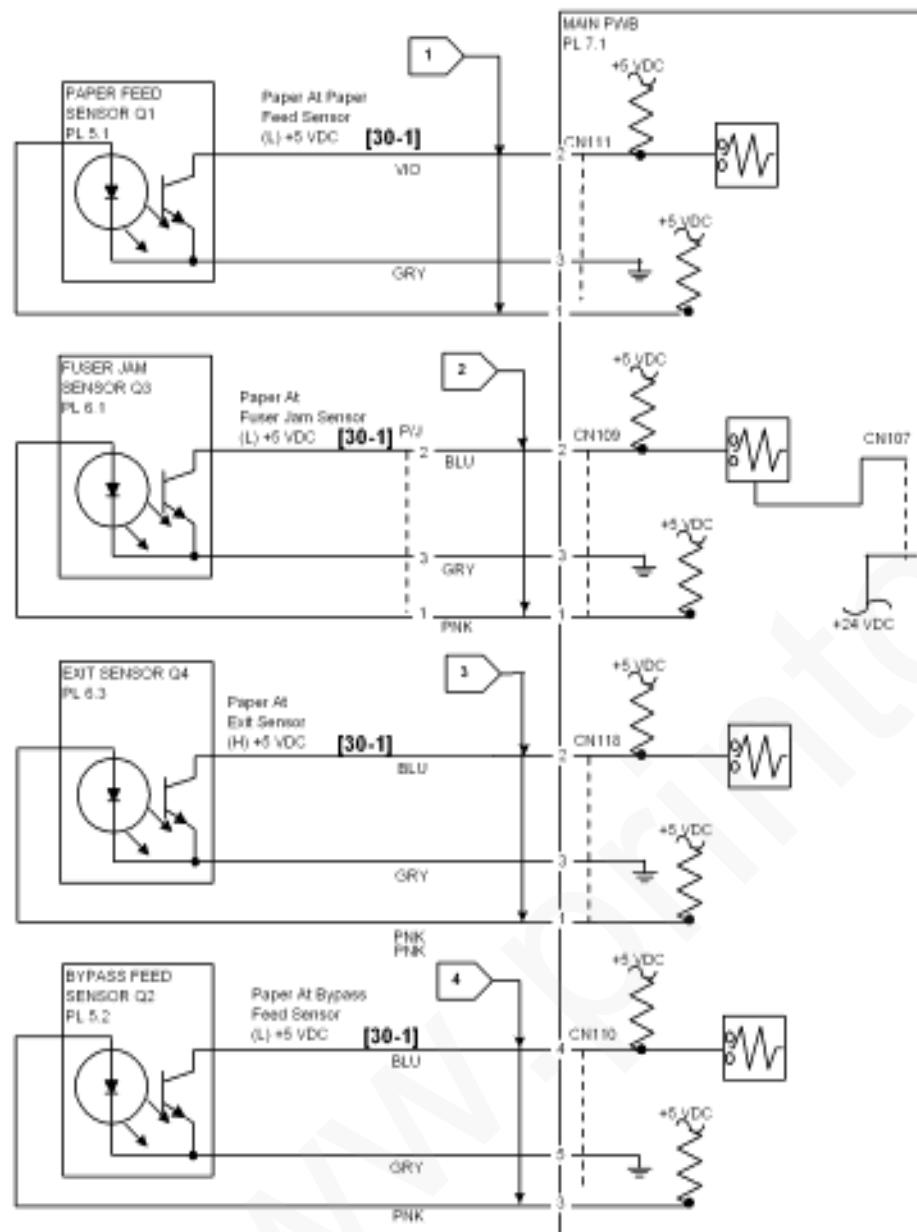


Figure 2 E2 Status Code (With SDF)

E7-[03] Status Code RAP (Without SDF)

The Main PWB sensed a Laser Output error.

Procedure

Switch off the power. Ensure that the Side Door is closed securely. Switch on the power.

The E7-[03] Status Code still exists.

Y N

Run several copies to ensure the problem does not reoccur.

There is +5 VDC measured from PJ CN107-3 to GND

Y N

There is +5 VDC measured from PJ CN107-4 to GND.

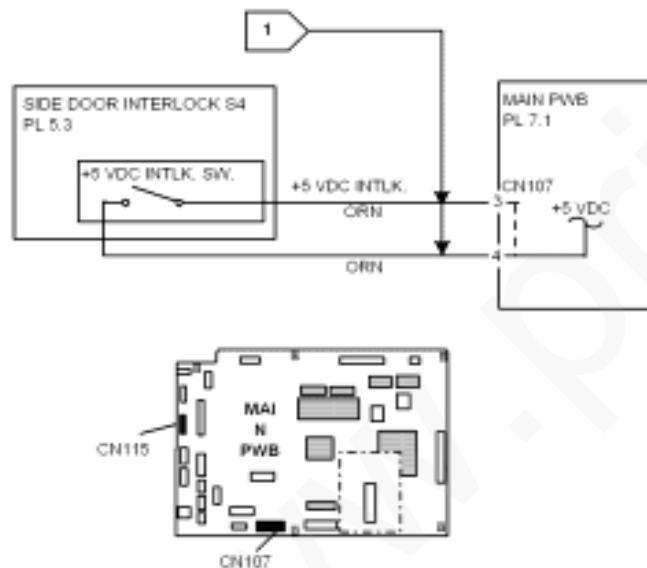
Y N

Replace the Main PWB, PL 7.1.

Go to Flag 1. Check the The wires for an open circuit. If the wires are good, replace the Side Door Interlock Switch S4, PL 5.3.

Perform the following:

- Check the connector PJ CN115 on the Main PWB and the Laser Harness (PL 3.2) to the Laser Module for an open or intermittent condition.
- If the connections and wires are good replace the Laser Module, PL 3.3.
- If the problem still exists, replace the Main PWB, PL 7.1.



E7-[03] Status Code RAP (With SDF)

The Main PWB sensed a Laser Output error.

Procedure

Switch off the power. Ensure that the Side Door is closed securely. Switch on the power.

The E7-[03] Status Code still exists.

Y N

Run several copies to ensure the problem does not reoccur.

There is +5 VDC measured from PJ CN103-3 to GND

Y N

There is +5 VDC measured from PJ CN103-4 to GND.

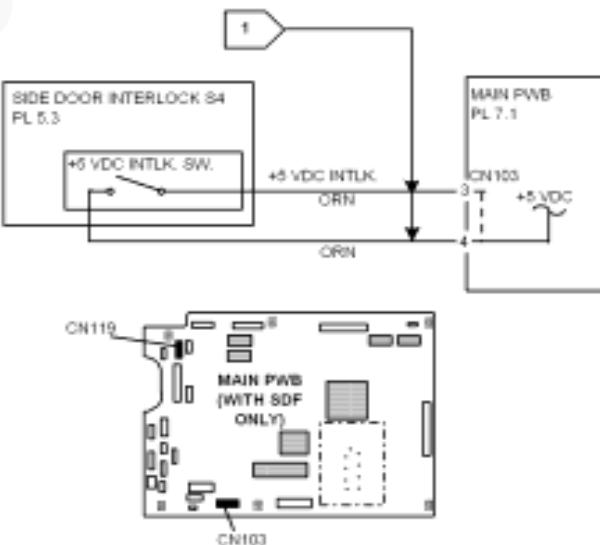
Y N

Replace the Main PWB, PL 7.1.

Go to Flag 1. Check the The wires for an open circuit. If the wires are good, replace the Side Door Interlock Switch S4, PL 5.3.

Perform the following:

- Check the connector PJ CN119 on the Main PWB and the Laser Harness (PL 3.2) to the Laser Module for an open or intermittent condition.
- If the connections and wires are good replace the Laser Module, PL 3.3.
- If the problem still exists, replace the Main PWB, PL 7.1.



E7-[04] Status Code RAP (Without SDF)

The Main PWB senses a CCD white level error.

Procedure

Switch off the power. Switch on the power. **The E7-[04] Status Code still exists.**

Y

Run several copies to ensure the problem does not reoccur.

Check the connector PJ CN121 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module (PL 3.2).

If the problem still exists, replace the Exposure Lamp Carriage (PL 3.1).

If the problem still exists, replace the Main PWB (PL 7.1).

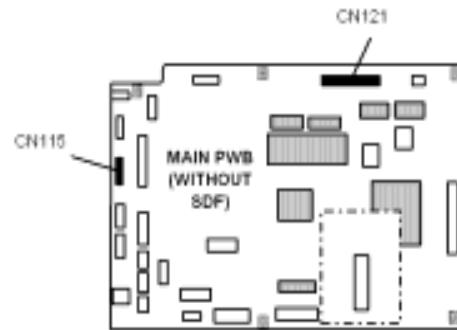


Figure 1 Main PWB (Without SDF)

E7-[04] Status Code RAP (With SDF)

The Main PWB senses a CCD white level error.

Procedure

Switch off the power. Switch on the power. **The E7-[04] Status Code still exists.**

Y

Run several copies to ensure the problem does not reoccur.

Check the connector PJ CN124 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module (PL 3.2).

If the problem still exists, replace the Exposure Lamp Carriage (PL 3.1).

If the problem still exists, replace the Main PWB (PL 7.1).

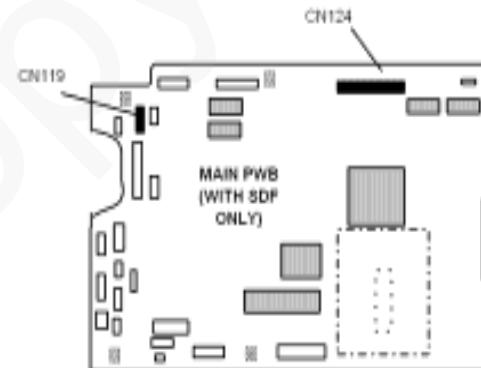


Figure 1 Main PWB (With SDF)

E7-[05] Status Code RAP (Without SDF)

The Main PWB sensed a CCD black level error.

Procedure

Switch off the power. Switch on the power. **The E7-[05] Status Code still exists.**

Y

Run several copies to ensure the problem does not reoccur.

Check the connector CN121 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module (PL 3.2).

If the problem still exists, replace the Main PWB (PL 7.1).

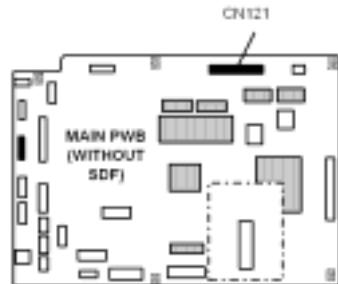


Figure 1 Main PWB (Without SDF)

E7-[05] Status Code RAP (With SDF)

The Main PWB sensed a CCD black level error.

Procedure

Switch off the power. Switch on the power. **The E7-[05] Status Code still exists.**

Y

Run several copies to ensure the problem does not reoccur.

Check the connector CN124 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module (PL 3.2).

If the problem still exists, replace the Main PWB (PL 7.1).

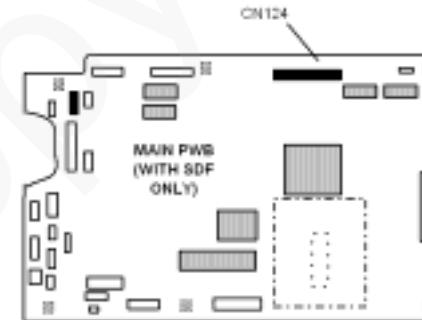


Figure 1 Main PWB (With SDF)

E7-[12] Status Code RAP (Without SDF)

The Main PWB sensed a CCD shading level error.

Procedure

Switch off the power. Switch on the power. **The E7-[12] Status Code still exists.**

Y

Run several copies to ensure the problem does not reoccur.

Check the connector CN121 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module PL 3.2.

If the problem still exists, replace the Main PWB PL 7.1.

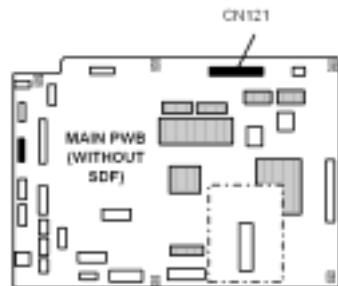


Figure 1 Main PWB (Without SDF)

E7-[12] Status Code RAP (With SDF)

The Main PWB sensed a CCD shading level error.

Procedure

Switch off the power. Switch on the power. **The E7-[12] Status Code still exists.**

Y

Run several copies to ensure the problem does not reoccur.

Check the connector CN124 on the Main PWB and the ribbon cable going to the CCD PWB for an open or intermittent condition.

If the connections are good replace the Lens/CCD Module PL 3.2.

If the problem still exists, replace the Main PWB PL 7.1.

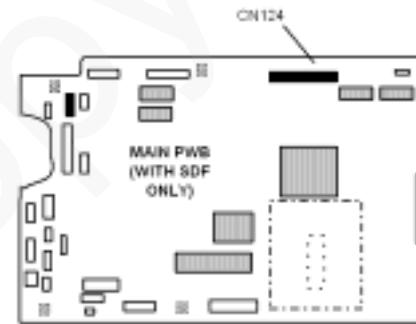


Figure 1 Main PWB (With SDF)

E7-[14] Status Code RAP

The Main PWB sensed an ASIC communication error.

Procedure

Switch off the power. Switch on the power. **The E7-[14] Status Code still exists.**

Y

Run several copies to ensure the problem does not reoccur.

Replace the Main PWB PL 7.1.

E7-[15] Status Code (Without SDF) RAP

The Main PWB sensed a Copy Lamp problem.

Procedure

Switch off the power. Switch on the power. **The E7-[15] Status Code still exists.**

Y

Run several copies to ensure the problem does not reoccur.

Check the connector CN118 on the Main PWB and the ribbon cable going to the Exposure Lamp Carriage PL 3.1, for an open or intermittent condition.

If the problem still exists, replace the Main PWB PL 7.1.



Figure 1 Main PWB (Without SDF)

E7-[15] Status Code RAP (With SDF)

The Main PWB sensed a Copy Lamp problem.

Procedure

Switch off the power. Switch on the power. **The E7-[15] Status Code still exists.**

Y N

Run several copies to ensure the problem does not reoccur.

Check the connector CN121 on the Main PWB and the ribbon cable going to the Exposure Lamp Carriage PL 3.1, for an open or intermittent condition.

If the problem still exists, replace the Main PWB PL 7.1.

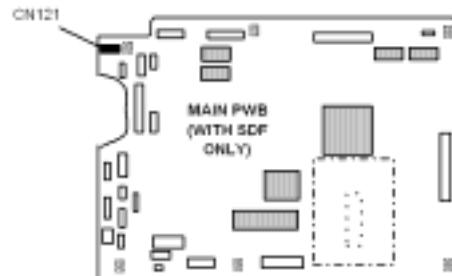


Figure 1 Main PWB (With SDF)

H2/H3 Status Code RAP (Without SDF)

H2, indicates that the Main PWB sensed a fuser overheat condition (Thermistor RT1 open).

H3, indicates that the Main PWB sensed a fuser overheat condition.

Procedure

The Status Code is an, H3.

Y N

Go to Flag 1 and check for an open wire. If the wires are good replace the Thermistor RT1, PL 6.1. If problem still exists, replace the Main PWB, PL 7.1.

Connect the meter between PJ CN109-17 (+) on the Main PWB and GND (refer to Flag 4).

There is 1.2 VDC present while an H3 status code is displayed.

Y N

NOTE: An H3/H4 status code must be cleared in diagnostics before the copier becomes operational again.

Enter Diagnostic code 14 to clear the H3 status code.

Switch off the power. Switch on the power.

The H3 status code appears within 5 seconds after power on.

Y N

The Ventilation Fan Motor MOT3 is running.

Y N

Go to the 4.1 Ventilation Fan Motor RAP (Without SDF).

Check the Thermistor RT1, PL 6.1 for contamination. If OK, replace the Power Supply PWB PS1, PL 7.1.

Go to Flag 1 and check the Thermistor circuit for a short circuit to ground. If OK, replace the Main PWB, PL 7.1.

Replace the Main PWB, PL 7.1. If problem still exists, replace the Power Supply PWB PS1, PL 7.1.

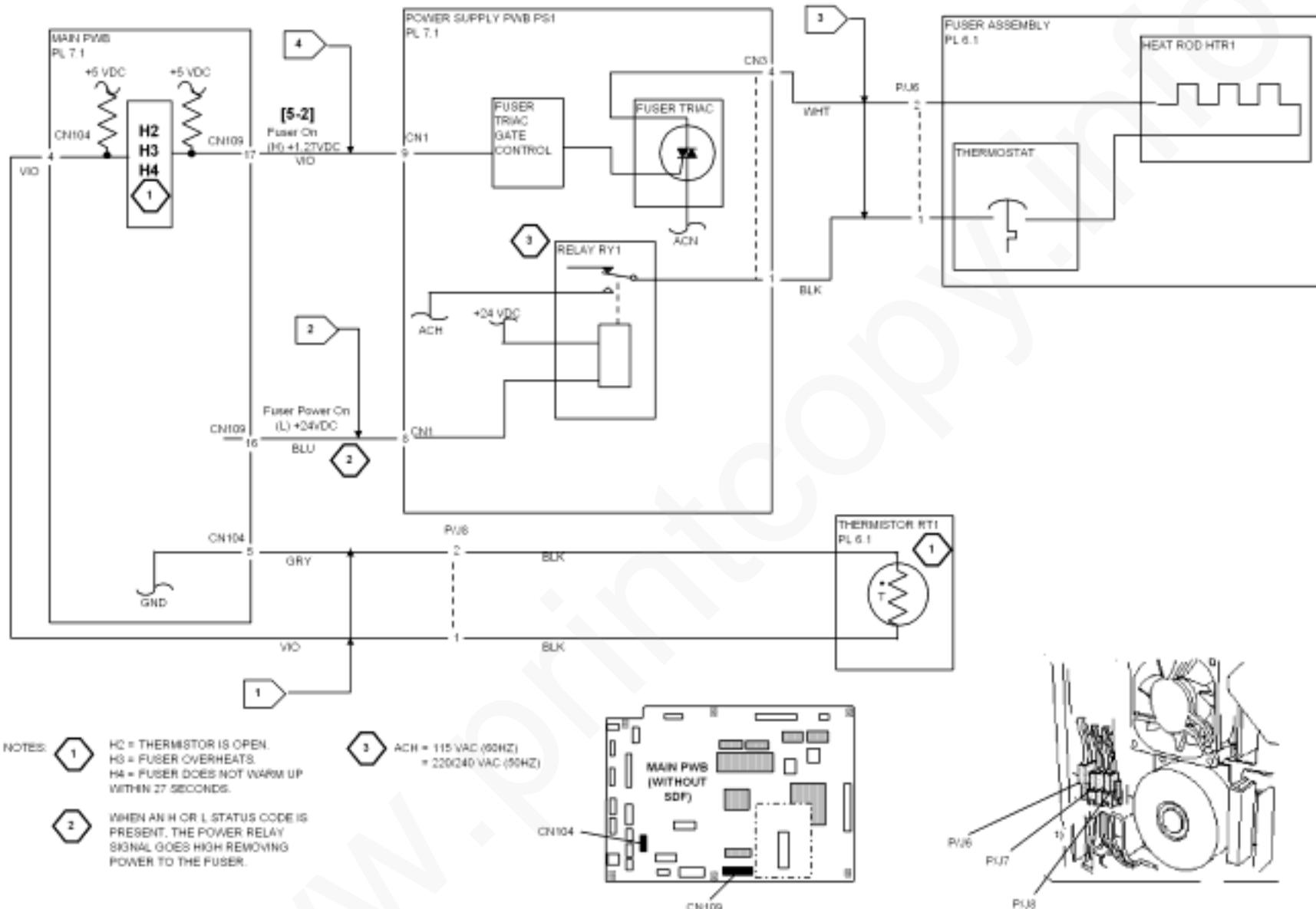


Figure 1 Fuser Heat (Without SDF)

H2/H3 Status Code RAP (With SDF)

H2, indicates that The Main PWB sensed a fuser overheat condition (that the thermistor RT1 was open).

H3, indicates that the Main PWB sensed a fuser overheat condition.

Procedure

The Status Code is an, H3.

Y N

Go to Flag 1 and check for an open wire. If the wires are good replace the Thermistor RT1, PL 6.1. If problem still exists, replace the Main PWB, PL 7.1.

Connect the meter between CN101-17 (+) on the Main PWB and GND (refer to Flag 4).

There is 1.2 VDC present while an H3 status code is displayed.

Y N

NOTE: An H3/H4 status code must be cleared in diagnostics before the copier becomes operational again.

Enter Diagnostic code 14 to clear the H3 status code.

Switch off the power. Switch on the power.

The H3 status code appears within 5 seconds after power on.

Y N

The Ventilation Fan Motor MOT3 is running.

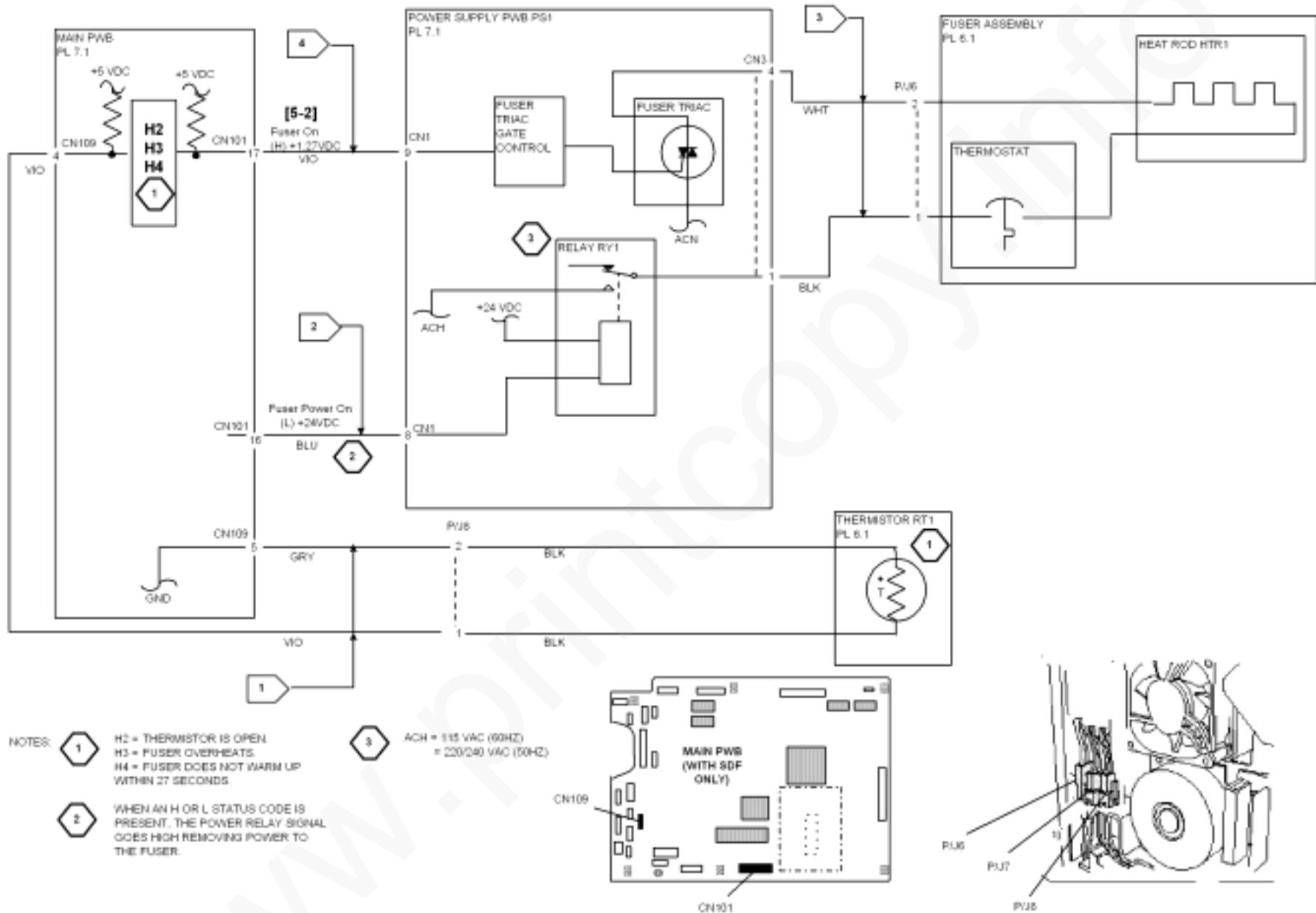
Y N

Go to the 4.1 Ventilation Fan Motor RAP (With SDF).

Check the Thermistor RT1, PL 6.1 for contamination. If OK, replace the Power Supply PWB PS1, PL 7.1.

Go to Flag 1 and check the Thermistor circuit for a short circuit to ground. If OK, replace the Main PWB, PL 7.1.

Replace the Main PWB, PL 7.1. If problem still exists, replace the Power Supply PWB PS1, PL 7.1.



H4 Status Code RAP (Without SDF)

The Main PWB sensed that the fuser did not reach 185° C within 27 seconds after power on or that the fuser dropped below 140° C for 6 seconds during the copy cycle.

NOTE: An H3/H4 status code must be cleared in diagnostics before the copier becomes operational again.

Procedure

Switch off the Power. Disconnect the connector, PJ 6 from the Fuser assembly. Connect the meter on the machine side P/J6 between pins 1 and 2 (refer to Flag 3). Set the multimeter to measure AC. Enter diagnostic code 5-2. **When the Start button is pressed the machine input line voltage is measured for approximately 5 seconds.**

Y N

Reconnect connector P/J6. Press the **Stop** button. Connect the DC Meter between CN109-16 and GND. Press the **Start** button. **The meter switches from +24 VDC to 0 VDC for 5 seconds.**

Y N

Go to Flag 2 and check the wire for an open or short circuit. **The wire is good.**

Y N

Repair the wire or replace the DC harness, PL 7.1.

Replace the Power Supply PWB PS1, PL 7.1.

Replace the Power Supply PWB PS1, PL 7.1.

Connect the meter between CN109-17 (+) on the Main PWB and GND (refer to Flag 4). Enter diagnostic code 14. **There is approximately 1.2 VDC present.**

Y N

Replace the Main PWB, PL 7.1. If problem still exists, replace the Power Supply PWB PS1, PL 7.1.

Switch off the power. Set the multimeter to the 200 ohm range. Measure the Fuser side of the connector PJ 6 between pins 1 and 2. **There is 1.7 ohms + or - 0.5 ohms measured between pins 1 and 2 of P/J 6.**

Y N

Replace the Fuser Assembly, PL 6.1.

Reconnect P/J6. Switch on the power. If the problem still exists, replace the Power Supply PWB PS1, PL 7.1.

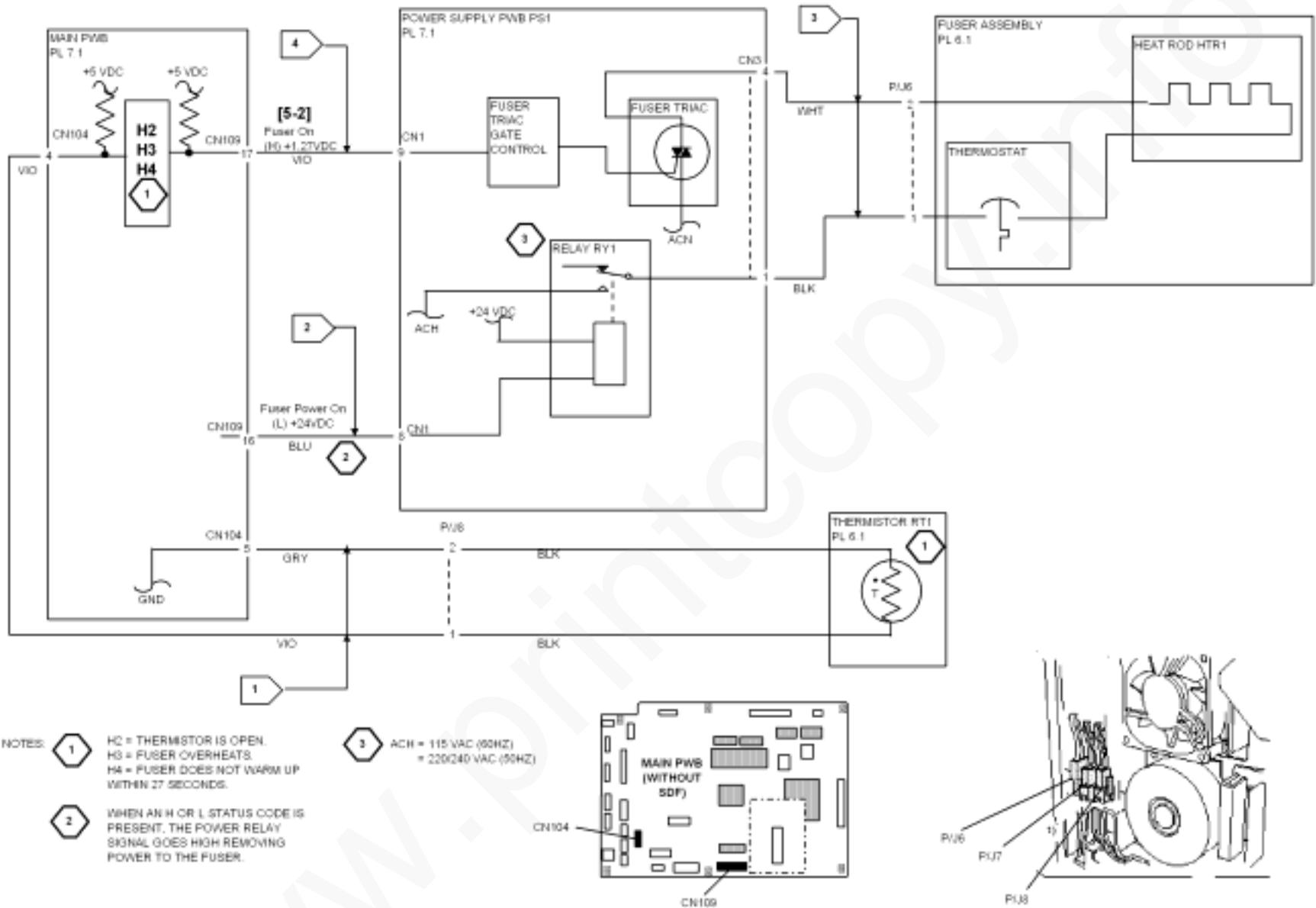


Figure 1 Fuser Heat (Without SDF)

H4 Status Code RAP (With SDF)

The Main PWB sensed that the fuser did not reach 185° C within 27 seconds after power on or that the fuser dropped below 140° C for 6 seconds during the copy cycle.

NOTE: An H3/H4 status code must be cleared in diagnostics before the copier becomes operational again.

Procedure

Switch off the Power. Disconnect the connector, PJ 6 from the Fuser assembly. Connect the meter on the machine side P/J6 between pins 1 and 2 (refer to Flag 3). Set the multimeter to measure AC. Enter diagnostic code 5-2. **When the Start button is pressed the machine input line voltage is measured for approximately 5 seconds.**

Y N

Reconnect connector P/J6. Press the **Stop** button. Connect the DC Meter between CN101-16 and GND. Press the **Start** button. **The meter switches from +24 VDC to 0 VDC for 5 seconds.**

Y N

Go to Flag 2 and check the wire for an open or short circuit. **The wire is good.**

Y N

Repair the wire or replace the DC harness, PL 7.1.

Replace the Power Supply PWB PS1, PL 7.1.

Replace the Power Supply PWB PS1, PL 7.1.

Connect the meter between CN101-17 (+) on the Main PWB and GND (refer to Flag 3).

Enter diagnostic code 14. **There is approximately 1.2 VDC present.**

Y N

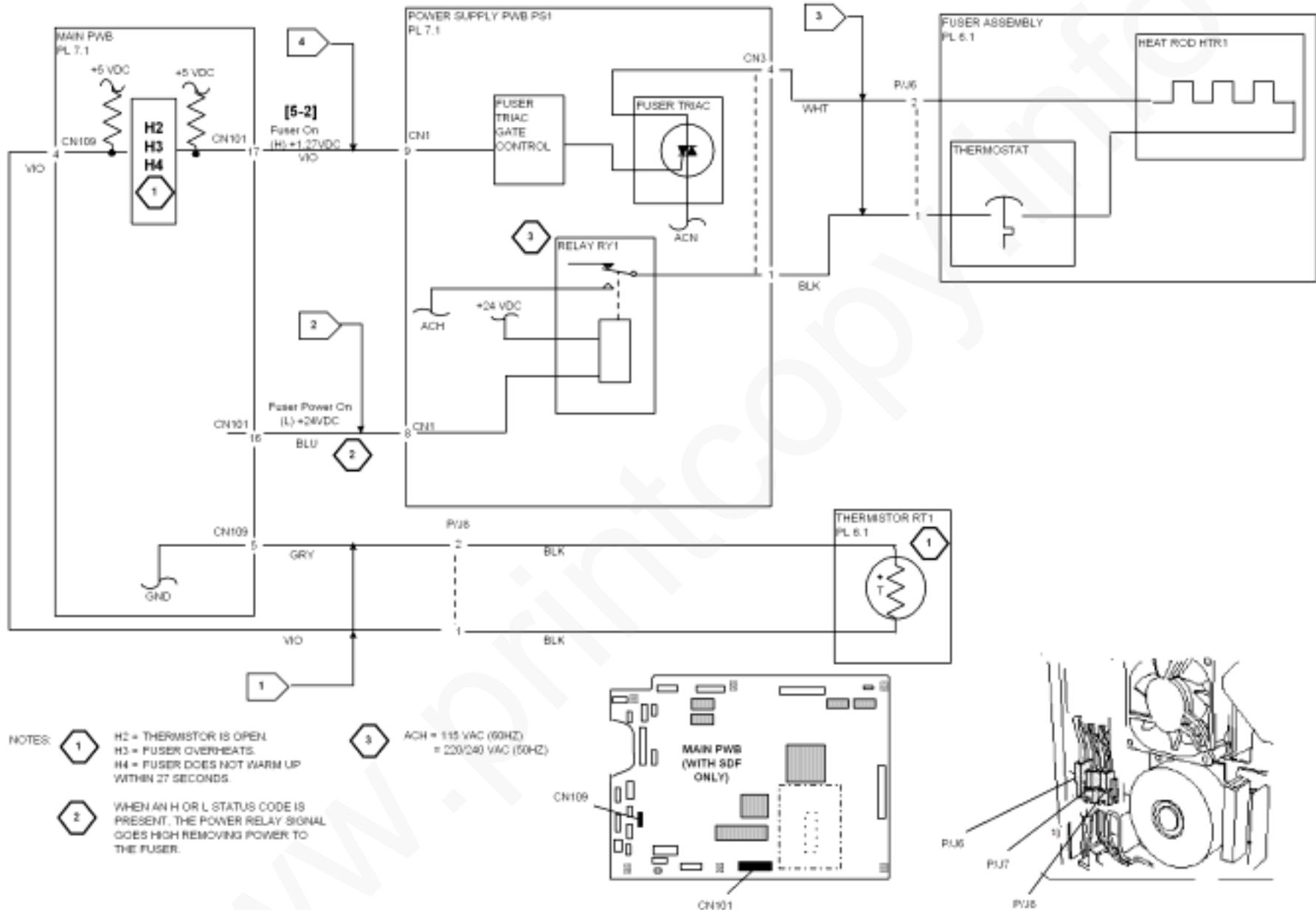
Replace the Main PWB, PL 7.1. If problem still exists, replace the Power Supply PWB PS1, PL 7.1.

Switch off the power. Set the multimeter to the 200 ohm range. Measure the Fuser side of the connector PJ 6 between pins 1 and 2. **There is 1.7 ohms + or - 0.5 ohms measured between pins 1 and 2 of P/J 6.**

Y N

Replace the Fuser Assembly, PL 6.1.

Reconnect P/J6. Switch on the power. If the problem still exists, replace the Power Supply PWB PS1, PL 7.1.



J1 Status Code RAP (Without SDF)

J1, Indicates that the Toner Cartridge is empty.

Initial Actions

Replace the Toner Cartridge. If a problem still exists, continue with the procedure.

NOTE: If the customer complains that the toner cartridge reached its end of life too soon, then instruct the customer that making copies with the document cover open or making copies with high image area coverage, such as photographs, will reduce the life of the toner cartridge.

Procedure

Enter diagnostic code **10**.

The Toner Motor comes on.

Y N

Press Clear.

Set the meter to measure.

Connect the meter between PJ CN101-1 (+) and CN101-2 (-) on the Main PWB.

Press Start.

There is approximately +22 VAC present.

Y N

Replace the Main PWB, PL 7.1.

Go to Flag 1 and check for an open. If the wires are good, replace the Toner Motor MOT4, PL 2.1.

Switch off the power.

Connect the meter between, PJ CN113-3 on the Main PWB (+) and chassis (-).

Switch the power on.

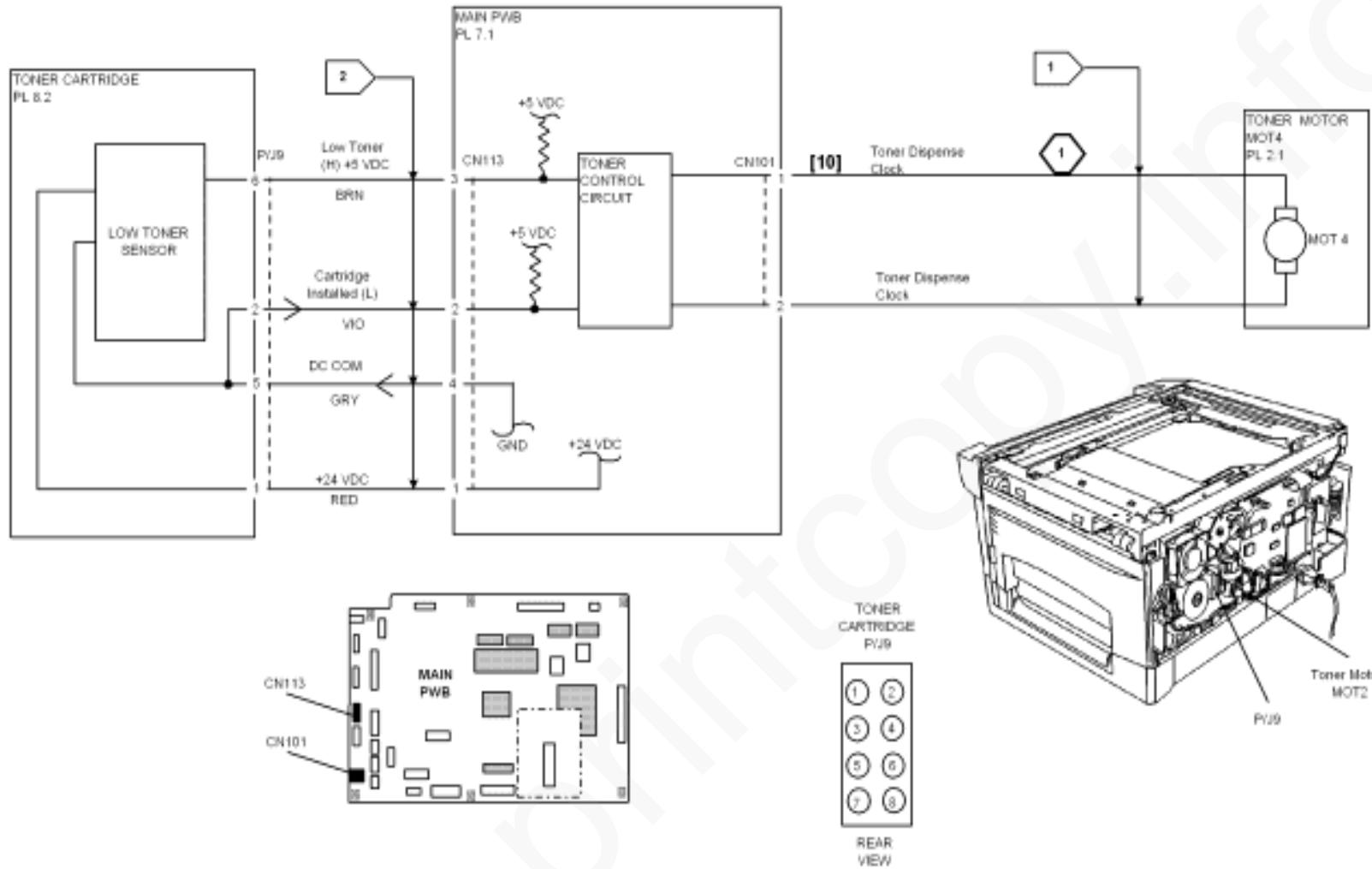
There is a steady +5 VDC present.

Y N

Replace the Main PWB, PL 7.1.

Perform the following:

- Go to Flag 2 and check the wires for an open circuit.
- Check for a mechanical drive problem to the Toner Cartridge.
- Replace the Toner Cartridge, PL 8.2.



NOTE: 1 THE TONER MOTOR IS ACTUATED WHEN LOW TONER CONCENTRATION IS SENSED BY THE LOW TONER SENSOR. IF THE MOTOR RUNS FOR 120 SECONDS AND THE LOW TONER SIGNAL IS STILL HIGH, THE TONER CARTRIDGE LAMP WILL FLASH.

Figure 1 J1 Status Code (Without SDF)

J1 Status Code RAP (With SDF)

J1, Indicates that the Toner Cartridge is empty.

Initial Actions

Replace the Toner Cartridge. If a problem still exists, continue with the procedure.

NOTE: If the customer complains that the toner cartridge reached its end of life too soon, then instruct the customer that making copies with the document cover open or making copies with high image area coverage, such as photographs, will reduce the life of the toner cartridge.

Procedure

Enter diagnostic code **10**.

The toner motor comes on.

Y N

Press Clear.

Set the meter to measure.

Connect the meter between CN105-1 (+) and CN105-2 (-) on the Main PWB.

Press Start.

There is approximately +22 VAC present.

Y N

Replace the Main PWB, PL 7.1.

Go to Flag 1 and check for an open. If the wires are good, replace the Toner Motor MOT4, PL 2.1.

Switch off the power.

Connect the meter between CN112-3 on the Main PWB (+) and chassis (-).

Switch the power on.

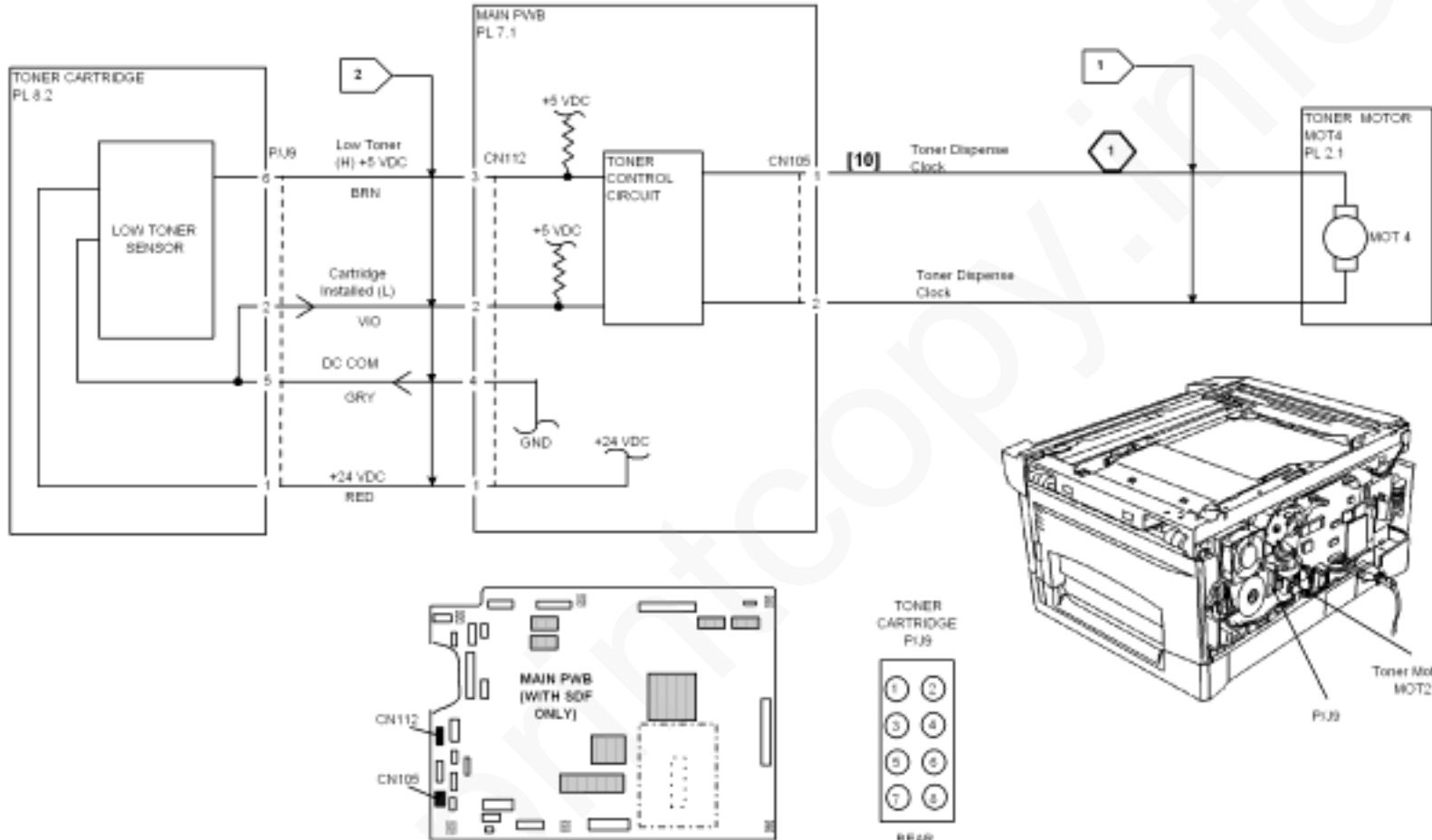
There is a steady +5 VDC present.

Y N

Replace the Main PWB, PL 7.1.

Perform the following:

- Go to Flag 2 and check the wires for an open circuit.
- Check for a mechanical drive problem to the Toner Cartridge.
- Replace the Toner Cartridge, PL 8.2.



NOTES: ① THE TONER MOTOR IS ACTUATED WHEN LOW TONER CONCENTRATION IS SENSED BY THE LOW TONER SENSOR. IF THE MOTOR RUNS FOR 120 SECONDS AND THE LOW TONER SIGNAL IS STILL HIGH, THE TONER CARTRIDGE LAMP WILL FLASH.

Figure 1 J1 Status Code (With SDF)

J2 Status Code RAP

J2, indicates the Drum Cartridge has reached the end of its life.

Initial Actions

Replace the Drum Cartridge with a new, not used, Drum Cartridge. If a problem still exists, continue with the procedure.

Procedure

There is less than 0.5 VDC measured between PJ CN116-2 and GND.

Y N

Go to Flag 1 and check the wires for an open circuit. If the wires are good, replace the Drum Cartridge Reset Switch, PL x.x.

Actuate the Drum Cartridge Reset Switch. There is +5 VDC measured between PJ CN116-2 and GND.

Y N

Go to Flag 1 and check the wires for a short circuit. If the wires are good, replace the Drum Cartridge Reset Switch, PL 5.1.

If the problem still exists, replace the Main PWB, PL 7.1.

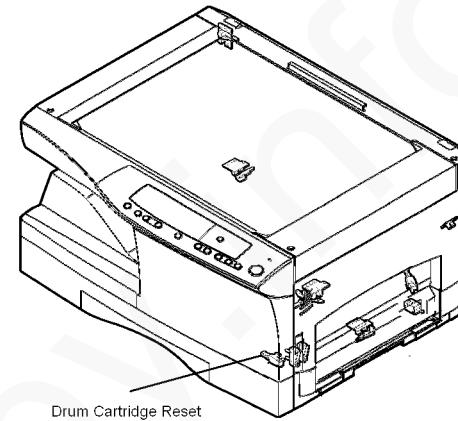


Figure 2 Drum Cartridge Reset Switch

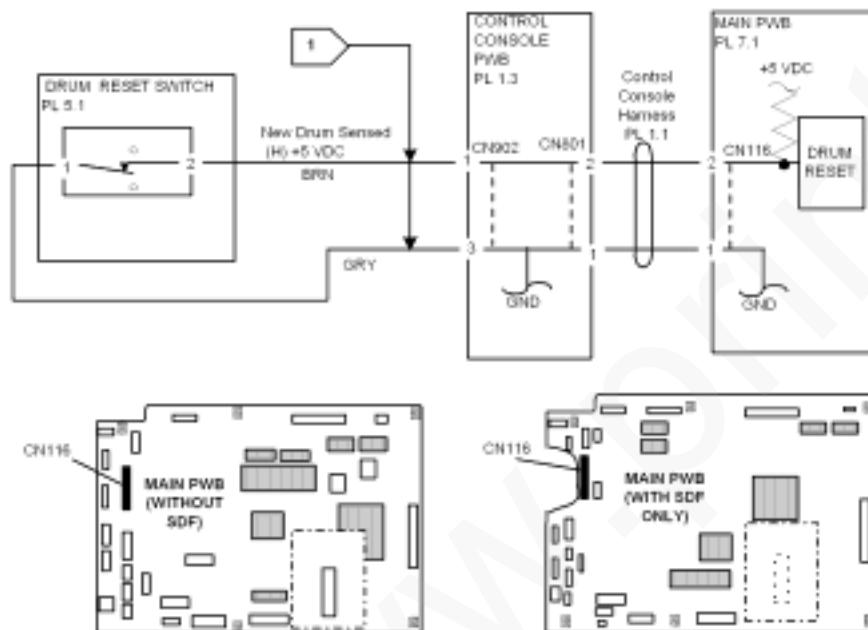


Figure 1 Drum Cartridge Reset circuit

L1/L3 Status Code Rap (Without SDF)

L1, indicates that the Main PWB sensed that the carriage did not leave home after power up or after start is pressed.

L3, indicates that the Main PWB sensed that the carriage did not return home after power up or after the copy cycle.

NOTE: Ensure that the shipping screw was removed at install.

Procedure

Switch off the power. Switch on the power. **The lamp carriage is in or moves to the home position.**

Y N

Remove the right cover to gain access to the scan shaft. Manually rotate the scan shaft to position the carriage in the home position. Connect the meter to, PJ CN122-2 and GND.
There is +5 VDC measured.

Y N

Go to Flag 1 and check the wires for an open circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

Move the carriage off the home position. **The meter reads LOW.**

Y N

Replace the Scan Home Sensor Q5, PL 3.2.

Go to the next step.

There is +5 VDC measured between, PJ CN122-2 on the Main PWB and GND.

Y N

Go to Flag 2 and check the wires for a short circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

Enter diagnostic code 1-1. Press the Start button twice. **The carriage moved.**

Y N

Connect the meter between, PJ CN120-1 (+) on the Main PWB and GND (-).
There is +24 VDC measured.

Y N

Replace the Main PWB, PL 7.1.

Check the following for wear or damage, PL 3.1:

- Scan Drive Gear/Pulley
- Scan Drive Belt
- Scan cables

The components are good.

Y N

Replace the defective components, PL 3.1.

Go to Flag 1 and check the connection on CN120 on the Main PWB. If the connection is good replace the Scan Drive Motor MOT2, PL 3.1.

A

Press the Clear button. Remove the right cover to gain access to the Scan Cable Drive Shaft, PL 3.1.

Manually rotate the Scan Cable Drive Shaft to position the carriage off the home position. Enter diagnostic code 1-1. **The Drum Cartridge lamp is off.**

Y N

Go to Flag 2 and check for an open circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

If the problem continues, replace the Main PWB, PL 7.1.

Check the following for wear or damage PL 3.1:

- Ribbon Cable connection to PJ CN120 on the Main PWB
- Scan Drive Gear/Pulley
- Scan Drive Belt
- Scan cables

The components are good.

Y N

Repair and or replace the defective components PL 3.1, PL 3.2.

If the problem still exists, replacing the Main PWB, PL 7.1.

A

Status Code Indicators

L1/L3 Status Code Rap (Without SDF)

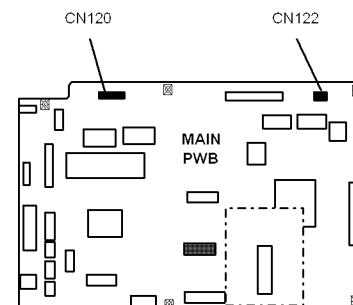
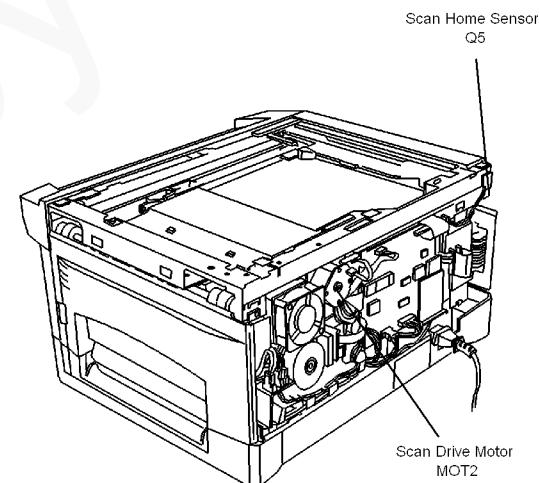
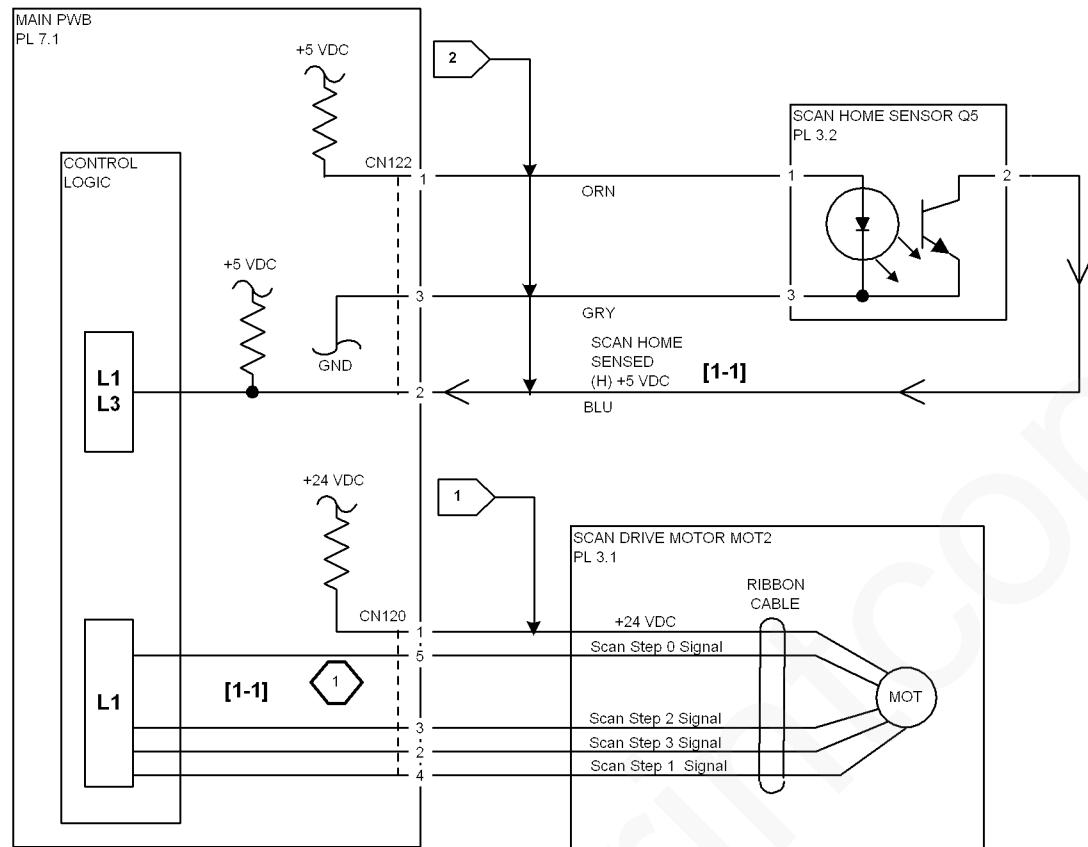


Figure 1 Scan Drive Circuit

L1/L3 Status Code RAP (With SDF)

L1, indicates that the Main PWB sensed that the carriage did not leave home after power up or after start is pressed.

L3, indicates that the Main PWB sensed that the carriage did not return home after power up or after the copy cycle.

NOTE: Ensure that the shipping screw was removed at install.

Procedure

Switch off the power. Switch on the power. **The lamp carriage is in or moves to the home position.**

Y N

Remove the right cover to gain access to the scan shaft. Manually rotate the scan shaft to position the carriage in the home position. Connect the meter to, PJ CN125-2 and GND.
There is +5 VDC measured.

Y N

Go to Flag 1 and check the wires for an open circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

Move the carriage off the home position. **The meter reads LOW.**

Y N

Replace the Scan Home Sensor Q5, PL 3.2.

Go to the next step.

There is +5 VDC measured between, PJ CN125-2 on the Main PWB and GND.

Y N

Go to Flag 2 and check the wires for a short circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

Enter diagnostic code 1-1. Press the Start button twice. **The carriage moved.**

Y N

Connect the meter between, PJ CN122-1 (+) on the Main PWB and GND (-).
There is +24 VDC measured.

Y N

Replace the Main PWB, PL 7.1.

Check the following for wear or damage, PL 3.1:

- Scan Drive Gear/Pulley
- Scan Drive Belt
- Scan cables

The components are good.

Y N

Replace the defective components, PL 3.1.

Go to Flag 1 and check the connection on CN122 on the Main PWB. If the connection is good replace the Scan Drive Motor MOT2, PL 3.1.

A

Press the Clear button. Remove the right cover to gain access to the Scan Cable Drive Shaft, PL 3.1.

Manually rotate the Scan Cable Drive Shaft to position the carriage off the home position. Enter diagnostic code 1-1. **The Drum Cartridge lamp is off.**

Y N

Go to Flag 2 and check for an open circuit. If the wires are good, replace the Scan Home Sensor Q5, PL 3.2.

If the problem continues, replace the Main PWB, PL 7.1.

Check the following for wear or damage PL 3.1:

- Ribbon Cable connection to PJ CN122 on the Main PWB
- Scan Drive Gear/Pulley
- Scan Drive Belt
- Scan cables

The Components are good.

Y N

Repair and or replace the defective components PL 3.1, PL 3.2.

If the problem still exists, replacing the Main PWB, PL 7.1.

A

Status Code Indicators

L1/L3 Status Code RAP (With SDF)

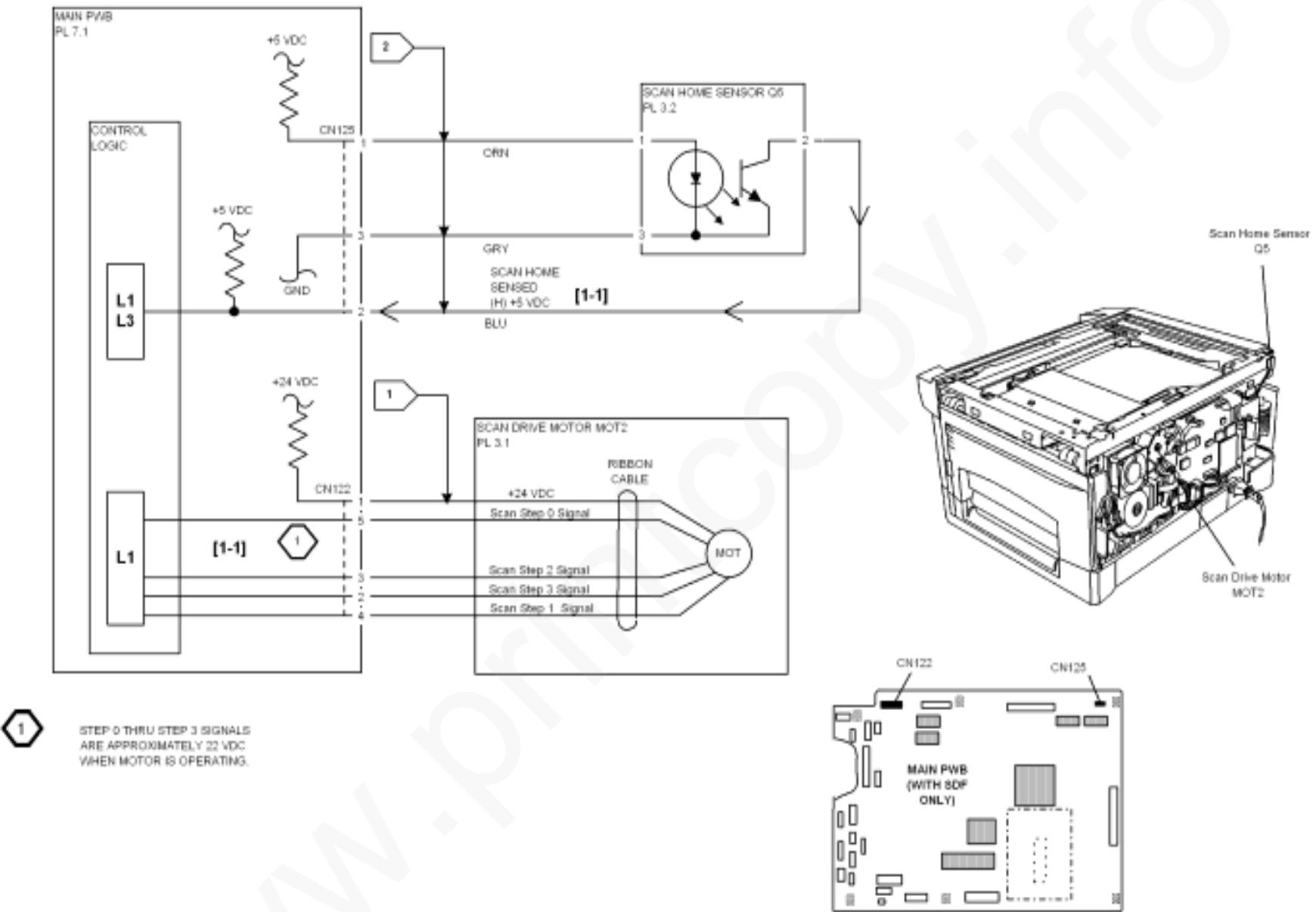


Figure 1 L1/L3 Status Code (With SDF)

L4 Status Code RAP (Without SDF)

The Main PWB sensed a Main Drive Motor MOT1 problem.

Initial Actions

Clear any jams in the paper path and ensure that the Side Door is closed.

Procedure

Enter diagnostic code 25-1. **The main motor comes on.**

Y N

Press the Clear button. Check the Ribbon Cable connection to PJ CN114 on the Main PWB. **The connection and the Ribbon Cable from the Main Drive Motor MOT1 are good.**

Y N

Repair or replace the Main Drive Ribbon Cable, PL 2.2.

Switch off the power. **The housing of the Main Drive Motor can be turned by hand.**

Y N

Check for a mechanical problem such as binding or broken gears or a binding drum cartridge. Repair and or replace as necessary PL 2.2.

Switch on the power. Connect the meter from PJ CN114 pins 1 and 2 (+) on the Main PWB and GND (-). **There is +24 VDC present.**

Y N

Replace the Main PWB, PL 7.1.

Connect the meter to CN1 pins 1 and 2 (+) on the Main Drive Motor and GND (-). **There is +24 VDC present.**

Y N

Replace the Main Drive Ribbon Cable, PL 2.2.

Press Start.

The voltage decreases to approximately 10 to 14 VDC.

Y N

Replace the Main PWB,PL 7.1.

If the problem still exists, replace the Main Drive Motor MOT1, PL 2.2.

Check for a mechanical problem such as binding or broken gears or a binding drum cartridge.

Repair/replace as necessary, PL 2.2.

If the problem still exists, replace the Main Drive Motor MOT1,PL 2.2.

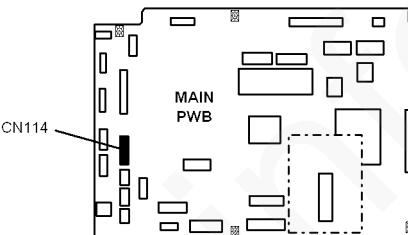
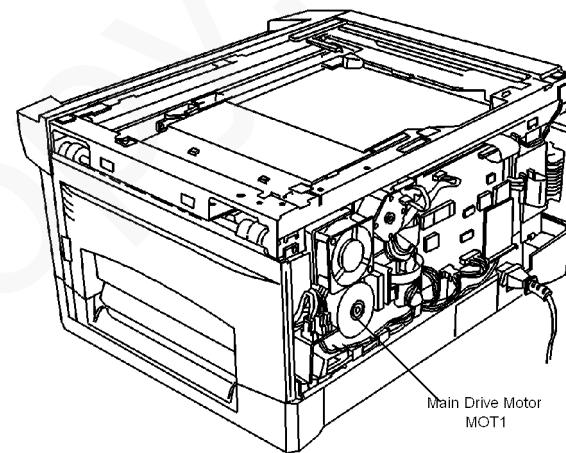


Figure 1 Main PWB



L4 Status Code RAP (With SDF)

The Main PWB sensed a Main Drive Motor MOT1 problem.

Initial Actions

Clear any jams in the paper path and ensure that the Side Door is closed.

Procedure

Enter diagnostic code 25-1. **The main motor comes on.**

Y N

Press the Clear button. Check the Ribbon Cable connection to PJ CN113 on the Main PWB. **The connection and the Ribbon Cable from the Main Drive Motor MOT1 are good.**

Y N

Repair or replace the Main Drive Ribbon Cable, PL 2.2.

Switch off the power. **The housing of the Main Drive Motor can be turned by hand.**

Y N

Check for a mechanical problem such as binding or broken gears or a binding drum cartridge. Repair and or replace as necessary PL 2.2.

Switch on the power. Connect the meter from PJ CN113 pins 1 and 2 (+) on the Main PWB and GND (-). **There is +24 VDC present.**

Y N

Replace the Main PWB, PL 7.1.

Connect the meter to CN1 pins 1 and 2 (+) on the Main Drive Motor and GND (-). **There is +24 VDC present.**

Y N

Replace the Main Drive Ribbon Cable, PL 2.2.

Press Start.

The voltage decreases to approximately 10 to 14 VDC.

Y N

Replace the Main PWB,PL 7.1.

If the problem still exists, replace the Main Drive Motor MOT1, PL 2.2.

Check for a mechanical problem such as binding or broken gears or a binding drum cartridge.

Repair/replace as necessary, PL 2.2.

If the problem still exists, replace the Main Drive Motor MOT1,PL 2.2.

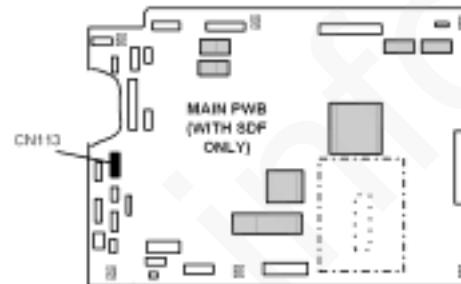
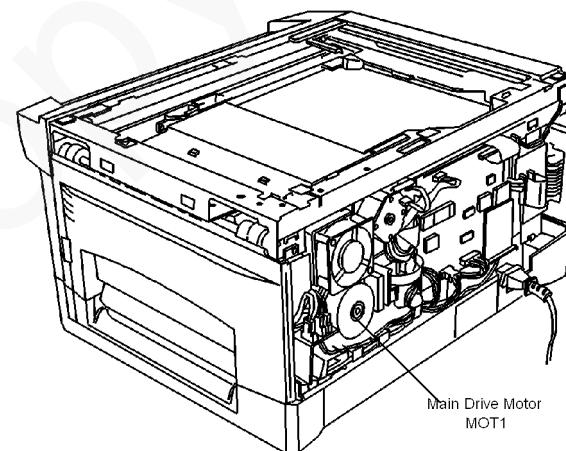


Figure 1 Main PWB (With SDF)



L6 Status Code RAP (Without SDF)

The Main PWB sensed a Polygon motor lock signal error.

Procedure

Enter diagnostic code 25-10. The Polygon Motor comes on for 30 seconds.

- Y N
Check the connector CN115 on the Main PWB and the wires and connectors on the Laser Module. **The connections and wires are good.**
Y N
Replace the Laser Harness,PL 3.3.

If the problem still exists, replace the Laser Module, PL 3.3.

Switch the power off. Switch the power on. If the problem still exists, replace the Laser Module, PL 3.3.

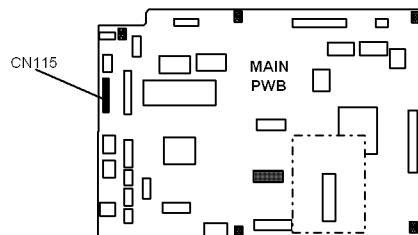


Figure 1 Main PWB

L6 Status Code RAP (With SDF)

The Main PWB sensed a Polygon motor lock signal error.

Procedure

Enter diagnostic code 25-10. The Polygon Motor comes on for 30 seconds.

- Y N
Check the connector CN119 on the Main PWB and the wires and connectors on the Laser Module. **The connections and wires are good.**
Y N
Replace the Laser Harness,PL 3.3.

If the problem still exists, replace the Laser Module, PL 3.3.

Switch the power off. Switch the power on. If the problem still exists, replace the Laser Module, PL 3.3.

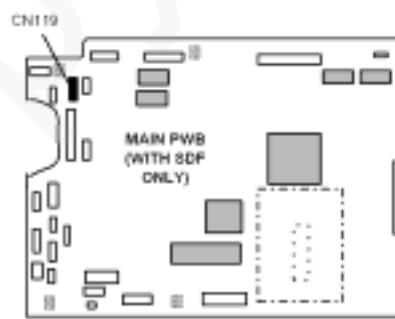


Figure 1 Main PWB (With SDF)

P Status Code RAP (Without SDF)

The Main PWB sensed that the selected Paper Tray is out of paper or a misfeed has occurred.

Initial Actions

Ensure pressure plate lock is removed from the paper tray.

Ensure the side and rear paper guides are installed and that they are not too tight against the paper.

Procedure

Enter the diagnostic code **30-1**.

Manually actuate and deactivate the Paper Feed Sensor Q1 while observing the Toner Cartridge lamp. **The Toner Cartridge lamp turns on and off.**

Y N

Perform the following:

- Check the sensor actuator for proper operation PL 5.1.
- Go to Flag 1 and check the wires for an open circuit.

If the checks are good, replace the Paper Feed Sensor Q1, PL 5.1.

The P status code occurs only when the Bypass Tray is used.

Y N

The P status code occurs only when the main tray is used.

Enter the diagnostic code **6-1**.

Connect the meter between PJ CN102-2 (+) on the Main PWB and ground (-). Press the **Start** button.

The meter alternates between +24 VDC and GND.

Y N

Replace the Main PWB, PL 7.1.

Go to Flag 2 and check the wires for an open circuit. If the wires are good, replace the Paper Feed Solenoid SOL1,PL 2.2.

Enter the diagnostic code **6-1**.

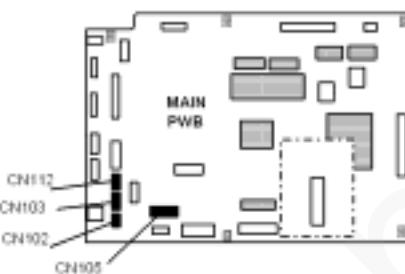
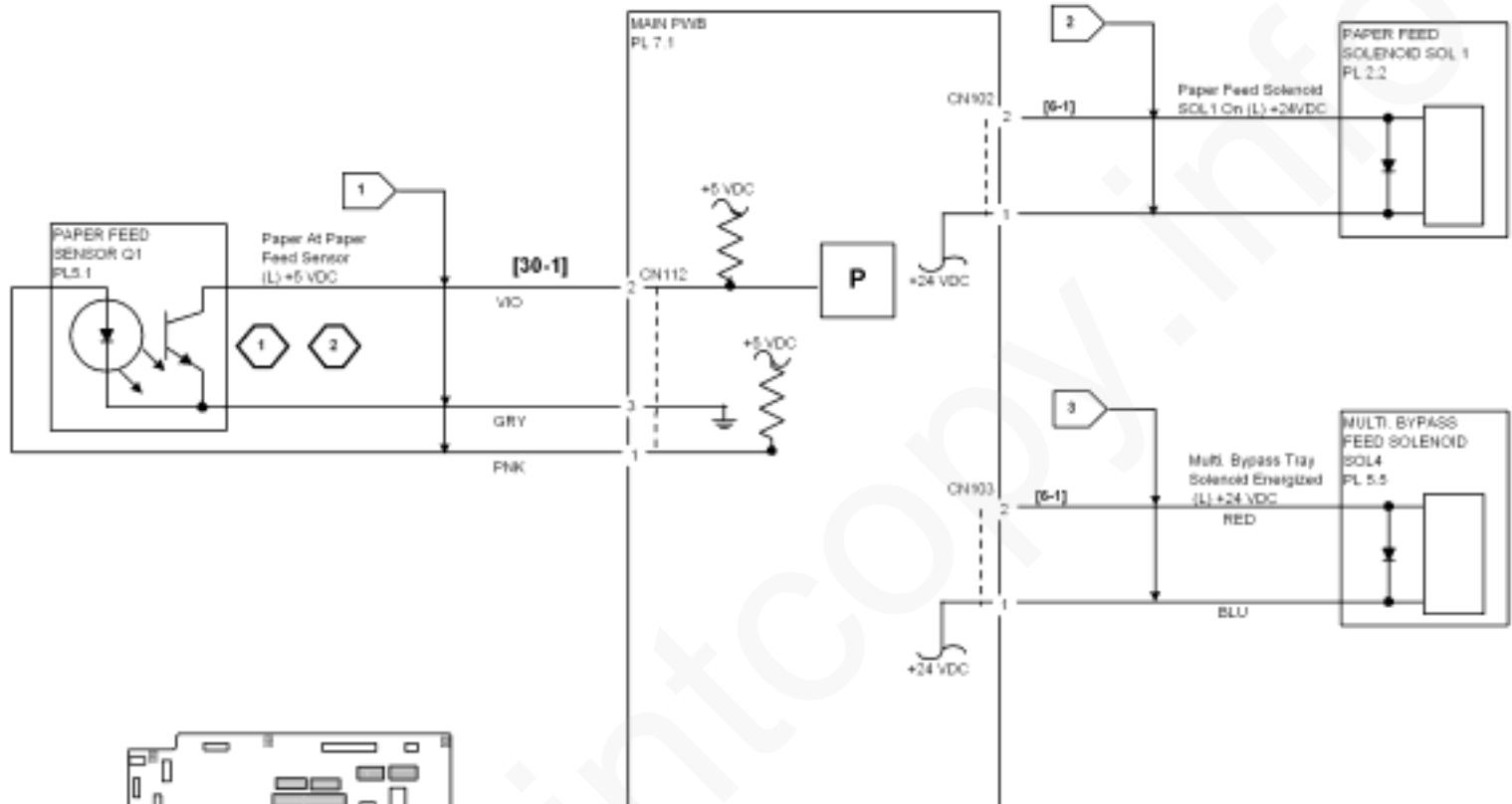
Connect the meter between, PJ CN111-2 (+) on the Main PWB and ground (-). Press the Start button. **The meter alternates between +24 VDC and GND.**

Y N

Replace the Main PWB, PL 7.1.

Check for a mechanical problem preventing the paper from feeding.

If the problem still exists, go to Flag 3 and check the wires for an open circuit. If the wires are good, replace the Bypass Feed Solenoid SOL4, PL 2.2.



NOTES:

- 1 A PAPER JAM WILL OCCUR (PAPER JAM LAMP FLASHING) IF:
 - A. THE PAPER FEED SENSOR IS ACTUATED AT POWER ON
 - B. THE PAPER FEED SENSOR DOES NOT DEACTIVATE IN TIME
- 2 A FLASHING "P" STATUS CODE WILL BE DISPLAYED IF THE PAPER FEED SENSOR Q1 IS NOT ACTUATED IN TIME AFTER START IS PRESSED.

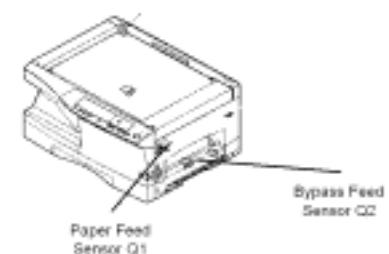
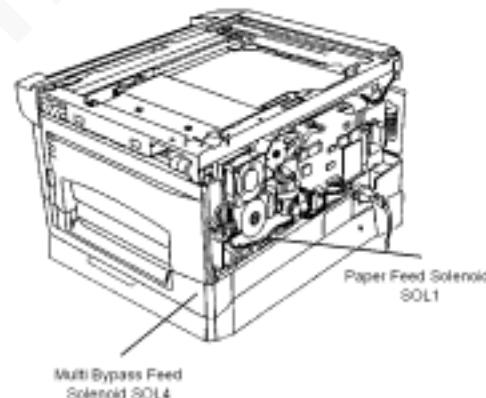


Figure 1 P Code (Without SDF)

P Status Code RAP (With SDF)

The Main PWB sensed that the selected Paper Tray is out of paper or a misfeed has occurred.

Initial Actions

Ensure pressure plate lock is removed from the paper tray.

Ensure the side and rear paper guides are installed and that they are not too tight against the paper.

Procedure

Enter the diagnostic code **30-1**.

Manually actuate and deactivate the Paper Feed Sensor Q1 while observing the Toner Cartridge lamp. **The Toner Cartridge LED comes on and goes off.**

Y N

Perform the following:

- Check the sensor actuator for proper operation PL 5.1.
- Go to Flag 1 and check the wires for an open circuit.

If the checks are good, replace the Paper Feed Sensor Q1, PL 5.1.

Manually actuate and deactivate the Tray 2 Feed Sensor Q7 while observing the Toner Cartridge lamp. **The Toner cartridge LED comes on and goes off.**

Y N

Perform the following:

- Check the sensor actuator for proper operation PL 5.8.
- Go to Flag 2 and check the wires for an open circuit.
- If the checks are good, replace the Tray 2 Paper Feed Sensor Q7,PL 5.8.

The P status code occurs when using the Main Tray.

Y N

The P status code occurs when using Tray 2.

Y N

The P status code occurs when using the Multisheet bypass Tray.

Y N

Return to The Call Flow Section of this manual to redefine the problem.

Enter the diagnostic Code **6-1** and select Multi Bypass Tray. Press the **Start** button. **The Multi Bypass Feed Solenoid SOL 4, engages and disengages several times.**

Y N

Go to Flag 5 and check the wires for an open circuit. If the wires are good, replace the Multi Bypass Solenoid SOL 4, PL 5.5.

Check for a mechanical problem preventing the paper from feeding PL 5.5.

Enter the diagnostic Code **6-1** and select Tray 2. Press the **Start** button. **The Tray 2 Feed Solenoid SOL2, engages and disengages several times.**

Y N

Go to Flag 4 and check the wires for an open circuit. If the wires are good, replace the Tray 2 Solenoid SOL 2, PL5.8.

A B

Check for a mechanical problem preventing the paper from feeding PL5.8.

Enter the diagnostic Code **6-1** and select the Main Tray. Press the **Start** button. **The Paper Feed Solenoid SOL1, engages and disengages several times.**

Y N

Go to Flag 3 and check the wires for an open circuit. If the wires are good, replace the Paper Feed Solenoid SOL 11, PL 2.2.

Check for a mechanical problem preventing the paper from feeding PL 2.2.

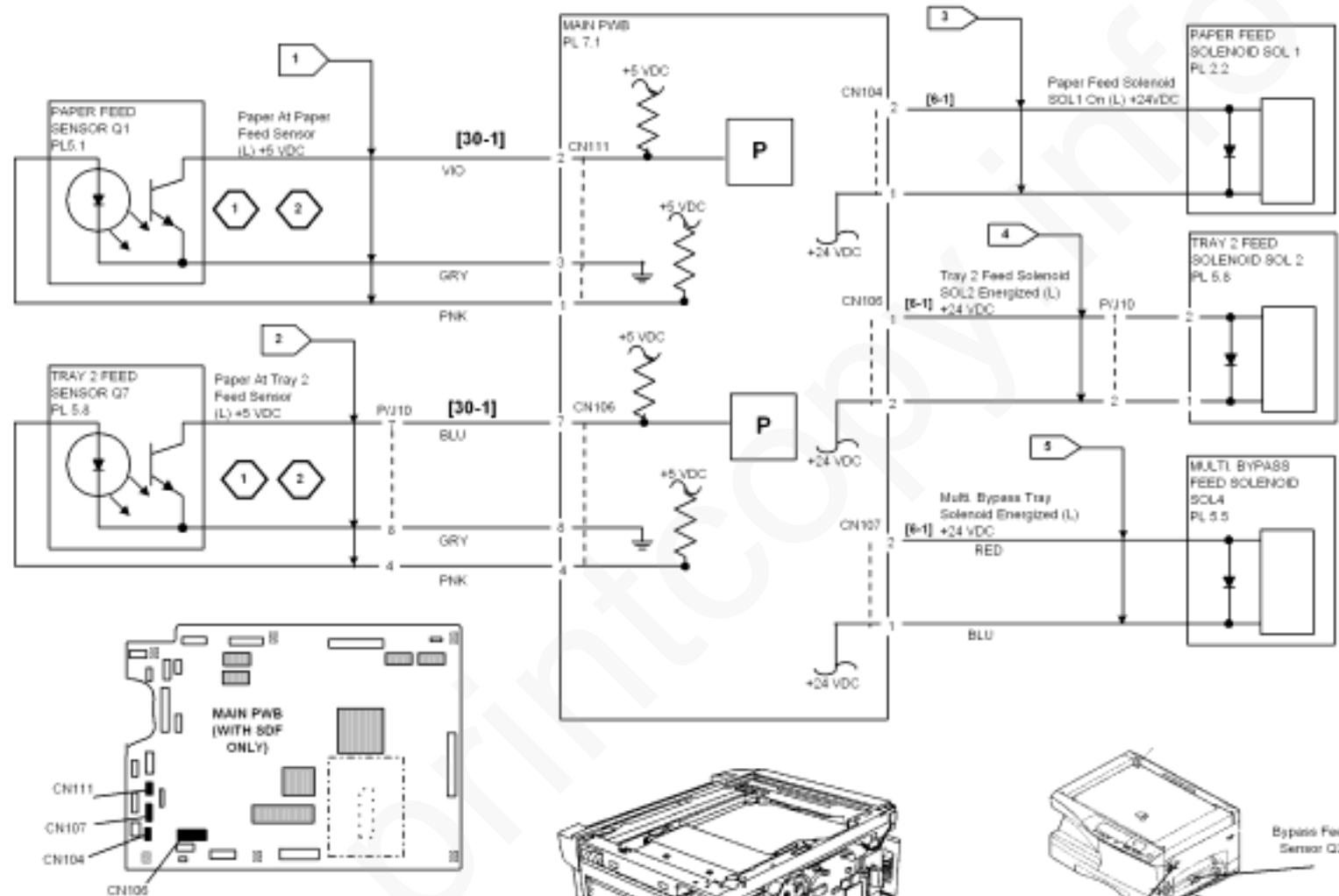


Figure 1 P Code (With SDF)

U2-[01] / U2-[04] Status Code RAP

U2-[02] indicates that the Main PWB sensed a memory failure.

U2-[04] indicates a that the Main PWB sensed an access error.

Procedure

Perform the U2 Status Code Clear Procedure:

- Enter the diagnostic code **16**.
- Press the Start button.

If the problem still exists, replace the Main PWB, PL 7.1.

Drum Cartridge LED On RAP

The Drum Cartridge Lamp on steady indicates that the Drum Cartridge is near end of life.

Procedure

If the Drum Cartridge LED is still on or flashing after changing the Cartridge, go to the, J2 Status Code RAP.

Toner Cartridge LED On RAP

Indicates that a low toner condition exists.

Initial Actions

NOTE: If the customer complains that the toner cartridge reached its end of life too soon, then instruct the customer that making copies with the document cover open or making copies with high image area coverage, such as photographs, will reduce the life of the toner cartridge.

Procedure

Replace the Toner Cartridge, PL 8.2. If the problem still exists, go to the, J1 Status Code RAP (Without SDF) or the J1 Status Code RAP (With SDF).

1.1 Power ON RAP (Without SDF)

Initial Actions

Ensure that input power is measured at the machine power cord.

Procedure

Switch off the power. While observing the Exposure Lamp Assembly, switch on the power.

The Exposure Lamp Assembly moves.

Y N

The Control Console is blank.

Y N

Go to the 2.1 Selection/Indication RAP (without SDF).

There is +5 VDC measured from PJ CN109 pin 21 and pin 22 to GND on the Main PWB.

Y N

ACH is measured between PJ CN2 & CN5 on the Power Supply PWB.

Y N

Go to Flag 1 and check for an open circuit.

Switch off the power. Disconnect the power. Check Fuses PJ F1 & F3 on the Power Supply PWB for an open circuit. **The Fuses are good.**

Y N

Replace the defective Fuse, PL 7.1. Switch on the power. **The problem is resolved.**

Y N

Replace the Power Supply PWB, PL 7.1.

Make several copies to ensure the problem is resolved.

Replace the Power Supply PWB, PL 7.1.

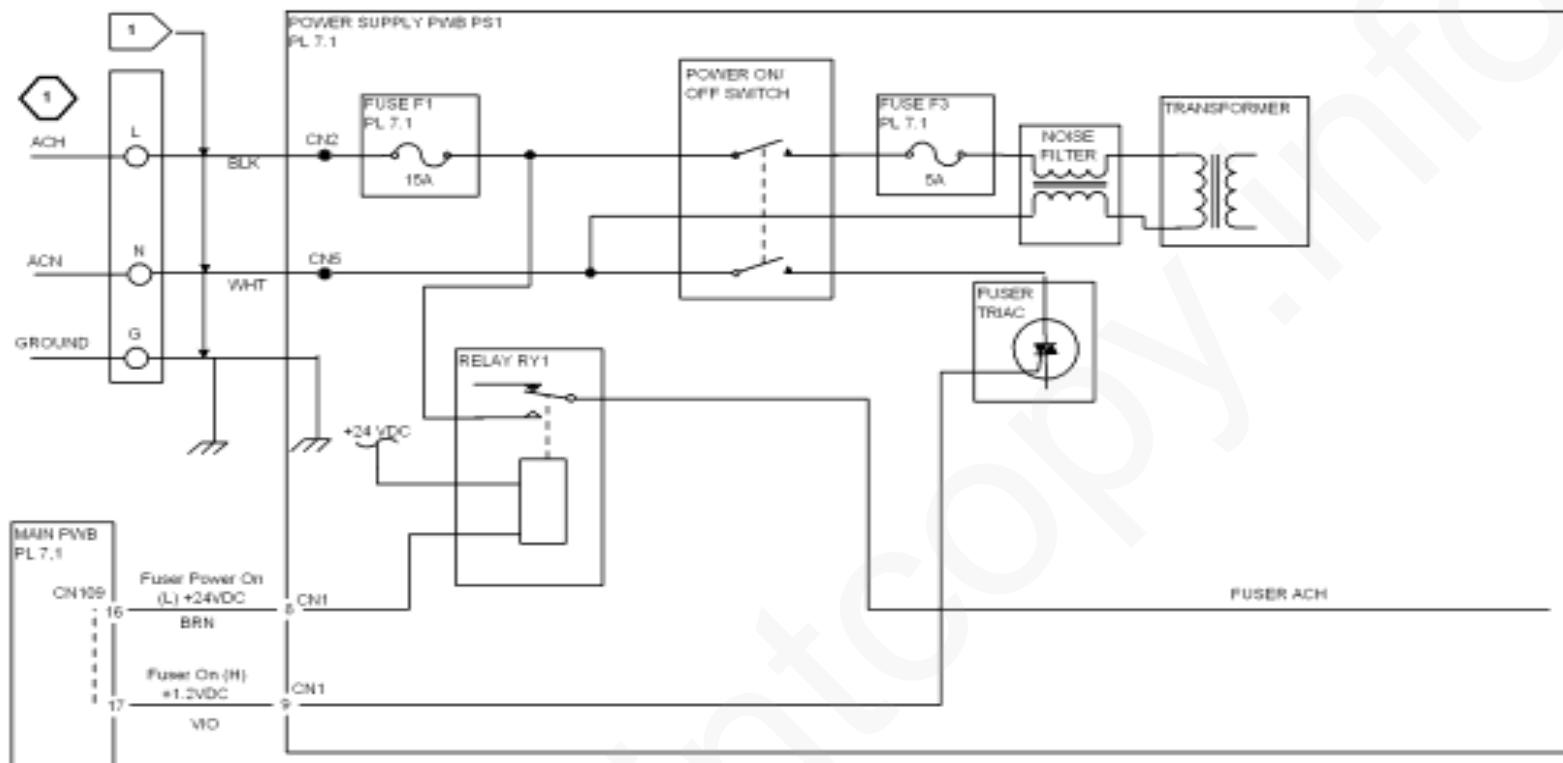
There is +24 VDC measured from PJ CN109 pins 7 and pin 8 to GND, on the Main PWB.

Y N

Go to the 1.2 DC Power (With SDF).

Go to the 2.2 Selection RAP (Without SDF).

Go to the 1.2 DC Power (With SDF).



Notes: ACH

= 115 VAC (60HZ)
= 220/240 VAC (50HZ)

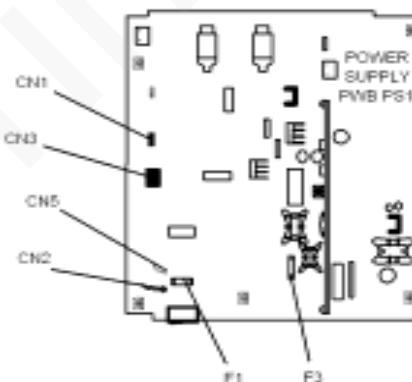


Figure 1 1.1 Power On (Without SDF)

1.1 Power On RAP (With SDF)

Initial Actions

Ensure that input power is measured at the machine power cord.

Procedure

Switch off the power. While observing the Exposure Lamp Assembly, switch on the power.

The Exposure Lamp Assembly moves.

Y N

The Control Console is blank.

Y N

Go to the 2.1 Selection/Indication RAP (without SDF).

There is +5 VDC measured from PJ CN101 pin 21 and pin 22 to GND on the Main PWB.

Y N

ACH is measured between PJ CN2 & CN5 on the Power Supply PWB.

Y N

Go to Flag 1 and check for an open circuit.

Switch off the power. Disconnect the power. Check Fuses PJ F1 and F3 on the Power Supply PWB for an open circuit. **The Fuses are good.**

Y N

Replace the defective Fuse, PL 7.1. Switch on the power. **The problem is resolved.**

Y N

Replace the Power Supply PWB, PL 7.1.

Make several copies to ensure the problem is resolved.

Replace the Power Supply PWB, PL 7.1.

There is +24 VDC measured from PJ CN101 pins 7 and pin 8 to GND, on the Main PWB.

Y N

Go to the 1.2 DC Power (With SDF).

Go to the 2.2 Selection RAP (Without SDF).

Go to the 1.2 DC Power (With SDF).

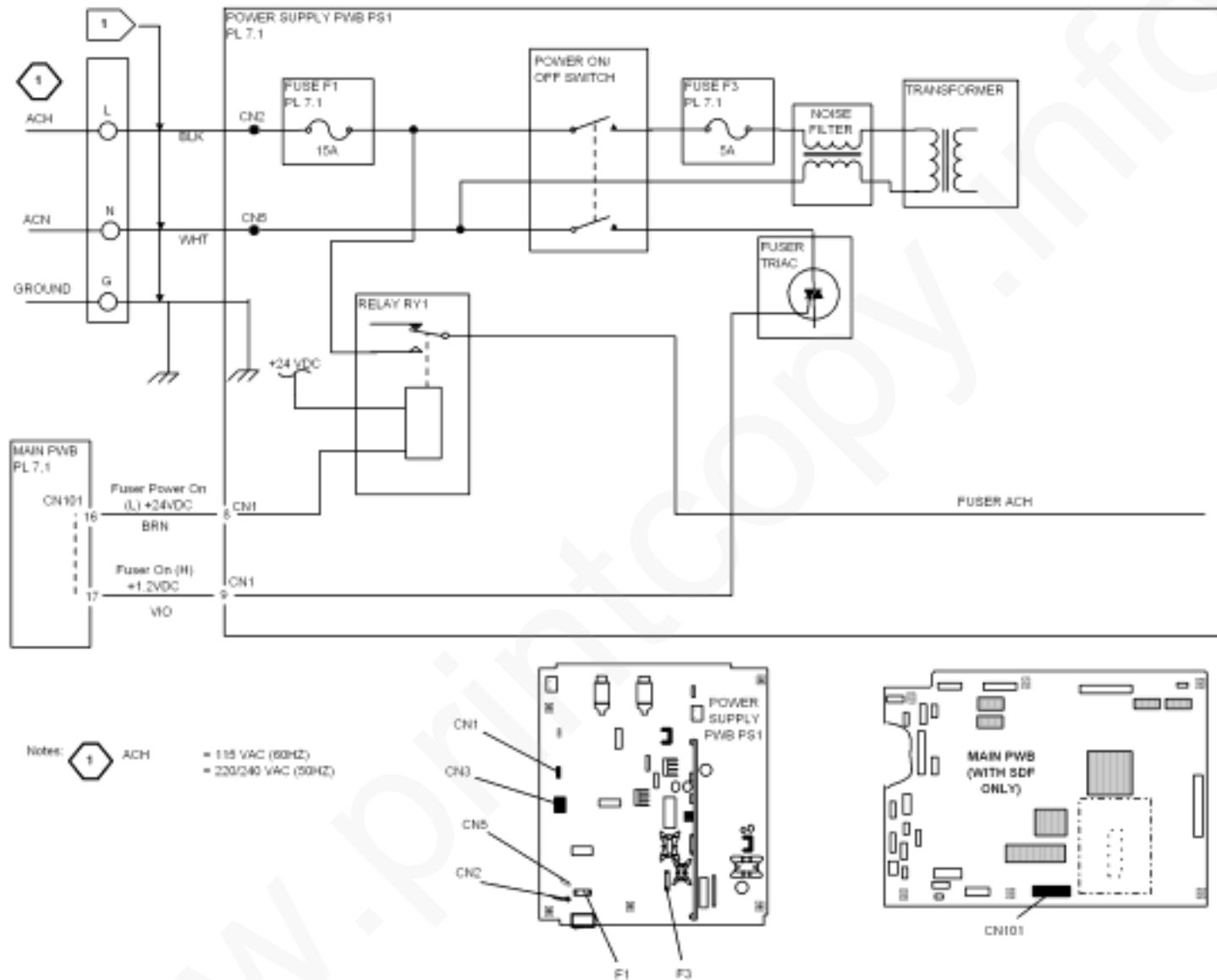


Figure 1 1.1 Power On (With SDF)

1.2 DC Power RAP (Without SDF)

NOTE: Enter this RAP from the 1.1 Power ON RAP (Without SDF) or the 1.1 Power On RAP (With SDF) only.

Procedure

There is +24 VDC measured between PJ CN109-7 and GND.

Y N

Go to Flag 1. Check the wires for an open circuit.

There is +12 VDC measured between PJ CN109-19 and GND.

Y N

Go to Flag 2. Check the wires for an open circuit.

There is +3.3 VDC measured between PJ CN109-20 and GND.

Y N

Go to Flag 3. Check the wire for an open circuit. If the wire is good, replace the Power Supply PWB PS1, PL 7.1.

There is +5 VDC measured between CN109-21 and GND.

Y N

Go to Flag 4. Check the wires for an open circuit.

If the problem still exists, refer to BSD, 1.2 Power Generation and Distribution (Section 7) for further DC power distribution checks. Check for an intermittent or loose connection. If the problem continues, replace the Main PWB, PL 7.1.

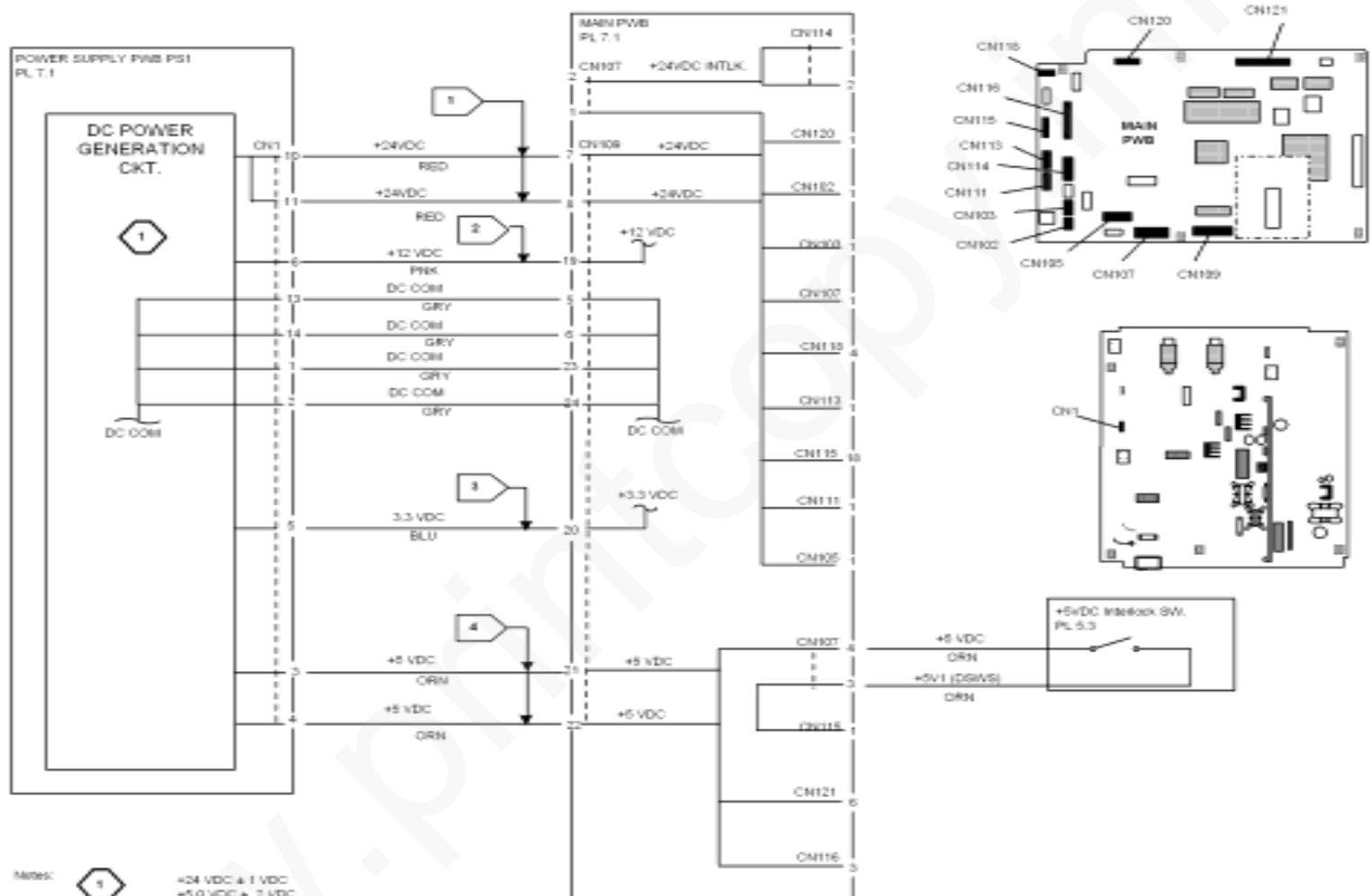


Figure 1 1.2 DC Power (Without SDF)

1.2 DC Power (With SDF)

NOTE: Enter this RAP from the 1.1 Power ON RAP (Without SDF) or the 1.1 Power On RAP (With SDF) only.

Procedure

There is +24 VDC measured between PJ CN101-7 and GND.

Y N

Go to Flag 1. Check the wires for an open circuit.

There is +12 VDC measured between PJ CN101-19 and GND.

Y N

Go to Flag 2. Check the wires for an open circuit.

There is +3.3 VDC measured between PJ CN101-20 and GND.

Y N

Go to Flag 3. Check the wire for an open circuit. If the wire is good, replace the Power Supply PWB PS1, PL 7.1.

There is +5 VDC measured between CN109-21 and GND.

Y N

Go to Flag 4. Check the wires for an open circuit.

If the problem still exists, refer to BSD, 1.2 Power Generation and Distribution (Section 7) for further DC power distribution checks. Check for an intermittent or loose connection. If the problem continues, replace the Main PWB, PL 7.1.

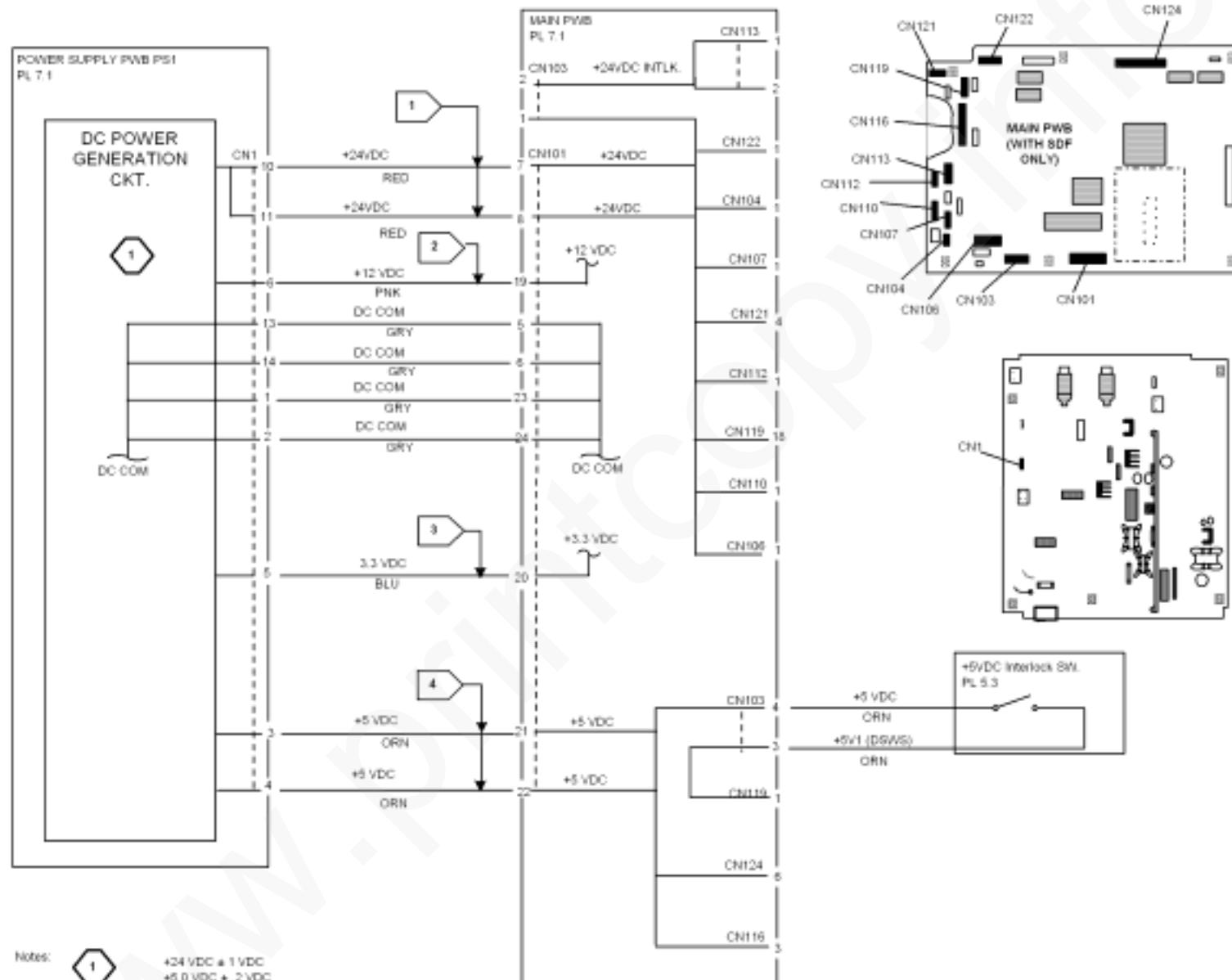


Figure 1 1.2 DC Power (With SDF)

2.1 Selection/Indication RAP (without SDF)

Procedure

Enter diagnostic code 5-1 to test the control console lamps.

Diagnostic code 5-1 can be entered.

Y N

Go to 2.2 Selection RAP.

Press Start several times to test the control console display and lamps. **All the LEDs come on for 5 seconds each time the Start button is pressed.**

Y N

The Ready lamp lights.

Y N

Go to the 2.2 Selection RAP (Without SDF).

Go to Flag 1. Check CN801 on the Control Console PWB and CN116 on the Main PWB for being properly connected to the Control Console Ribbon Cable. If defective, replace the Control Console Ribbon Cable, PL 6.3. If good, replace the Control Console PWB, PL 1.3.

If the problem still exists, replace the Main PWB, PL 7.1.

For all selection problems, go to the 2.2 Selection RAP (Without SDF).

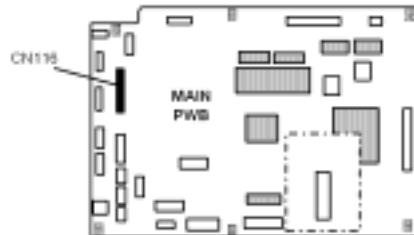


Figure 1 Main PWB (Without SDF)

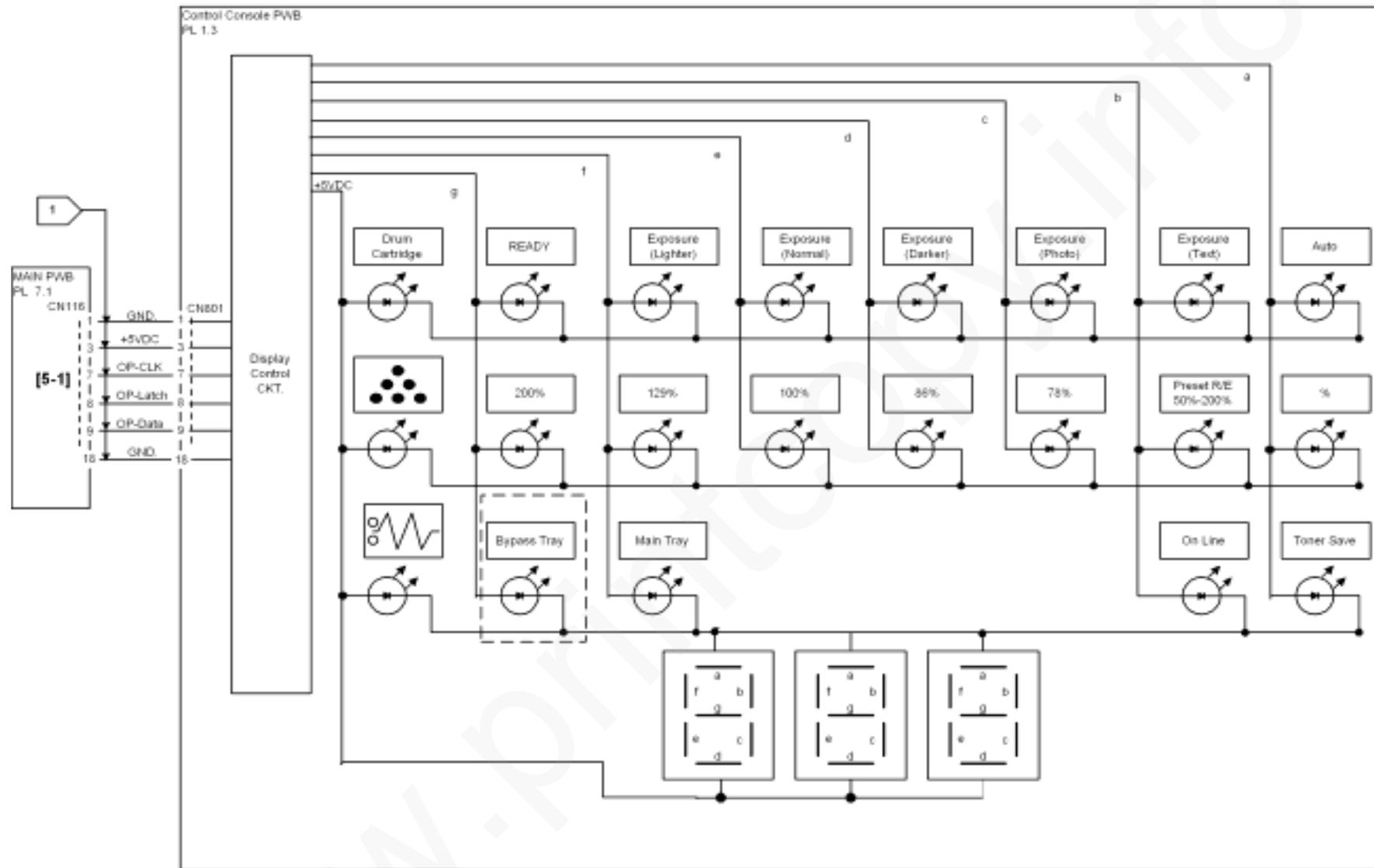


Figure 2 2.1 Selection/Indicator (Without SDF)

2.1 Selection/Indication RAP (with SDF)

Procedure

Enter diagnostic code 5-1 to test the control console lamps.

Diagnostic code 5-1 can be entered.

Y N

Go to 2.2 Selection RAP.

Press Start several times to test the control console display and lamps. **All the LEDs come on for 5 seconds each time the Start button is pressed.**

Y N

The Ready lamp lights.

Y N

Go to the 2.2 Selection RAP (Without SDF).

Go to Flag 1. Check CN801 on the Control Console PWB and CN116 on the Main PWB for being properly connected to the Control Console Ribbon Cable. If defective, replace the Control Console Ribbon Cable, PL 6.3. If good, replace the Control Console PWB, PL 1.3.

If the problem still exists, replace the Main PWB, PL 7.1.

For all selection problems, go to the 2.2 Selection RAP (Without SDF).

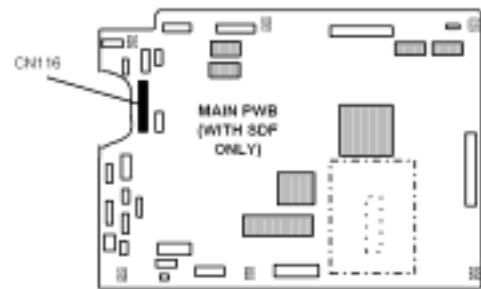


Figure 1 Main PWB (With SDF)

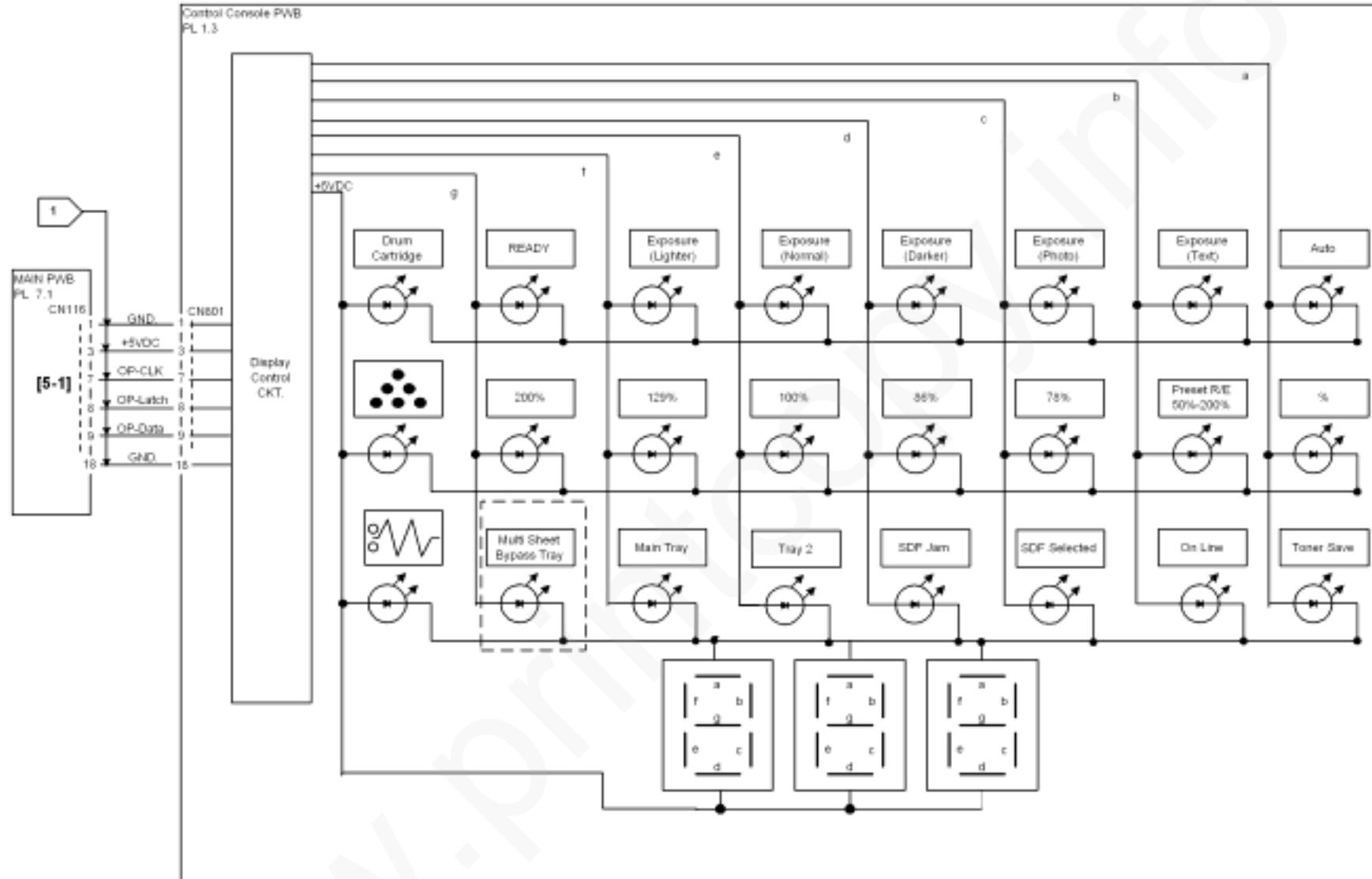


Figure 2 2.1 Selection/Indication (With SDF)

2.2 Selection RAP (Without SDF)

Procedure

Switch power off, then on.

The Ready lamp comes on or is flashing.

Y N

Go to Flag 1. Check connectors and the Ribbon Cable for an open circuit. Replace the Control Console Ribbon Cable, PL 6.3 if required.

Press Start button. **The print cycle starts.**

Y N

Replace the Control Console PWB, PL 1.3.

If a problem still exists, replace the Control Console PWB, PL 1.3.

If the problem continues, replace the Main PWB, PL 7.1.

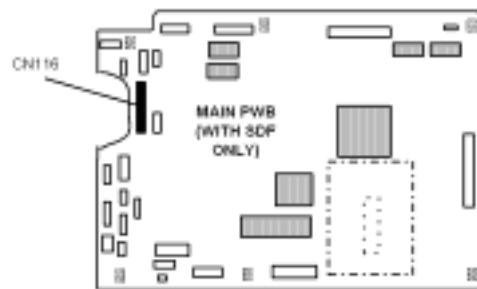


Figure 1 Main PWB (Without SDF)

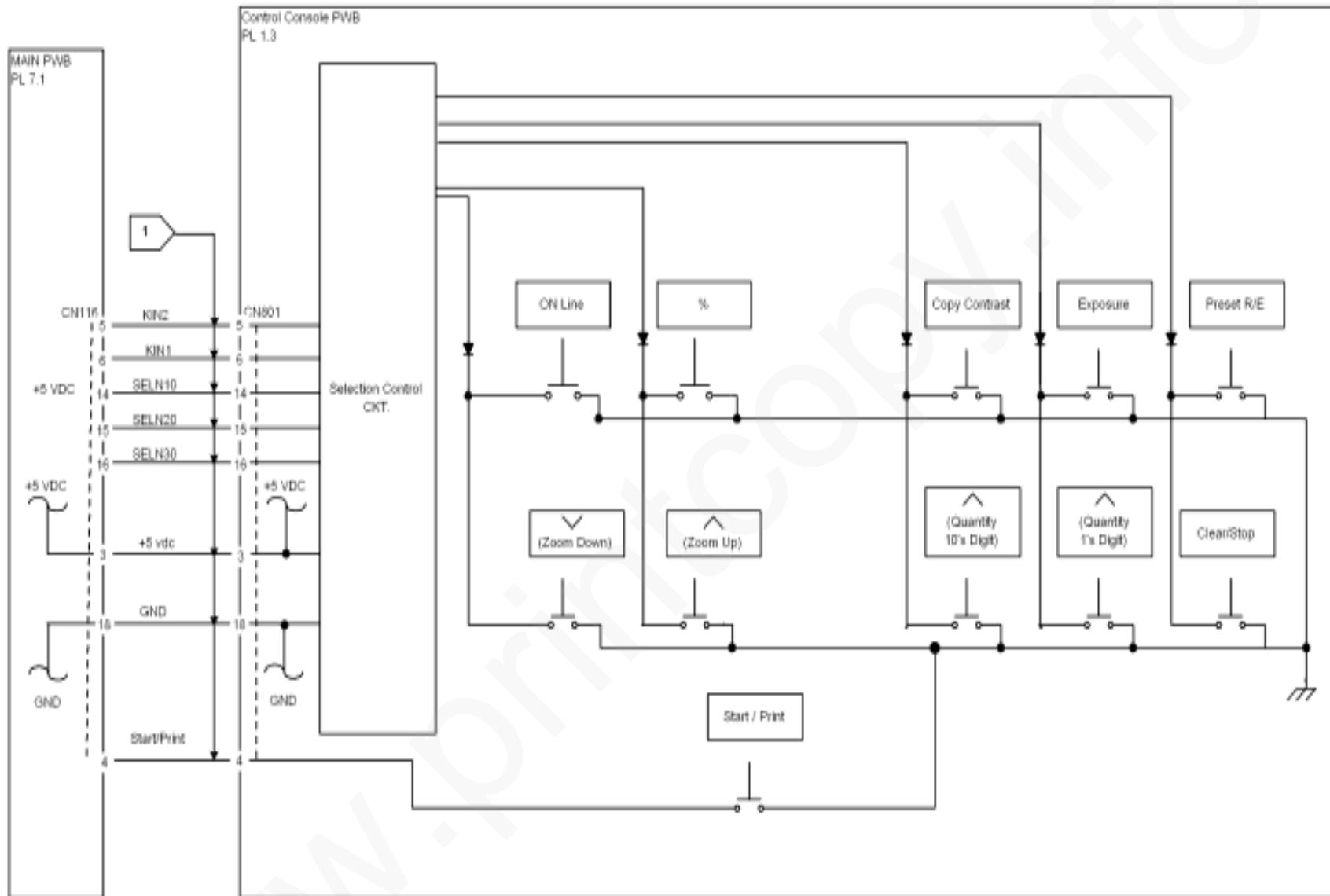


Figure 2 2.2 Selection (Without SDF)

2.2 Selection RAP (With SDF)

Procedure

Switch power off, then on.

The Ready lamp comes on or is flashing.

Y **N**

Go to Flag 1. Check connectors and the Ribbon Cable for an open circuit. Replace the Control Console Ribbon Cable, PL 6.3 if required.

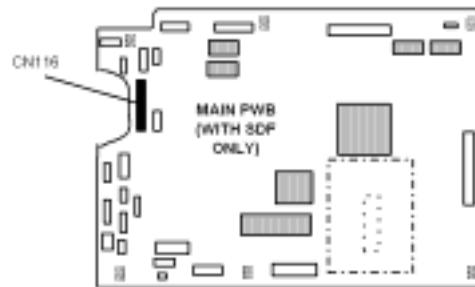
Press Start button. **The print cycle starts.**

Y **N**

Replace the Control Console PWB, PL 1.3.

If a problem still exists, replace the Control Console PWB, PL 1.3.

If the problem continues, replace the Main PWB, PL 7.1.



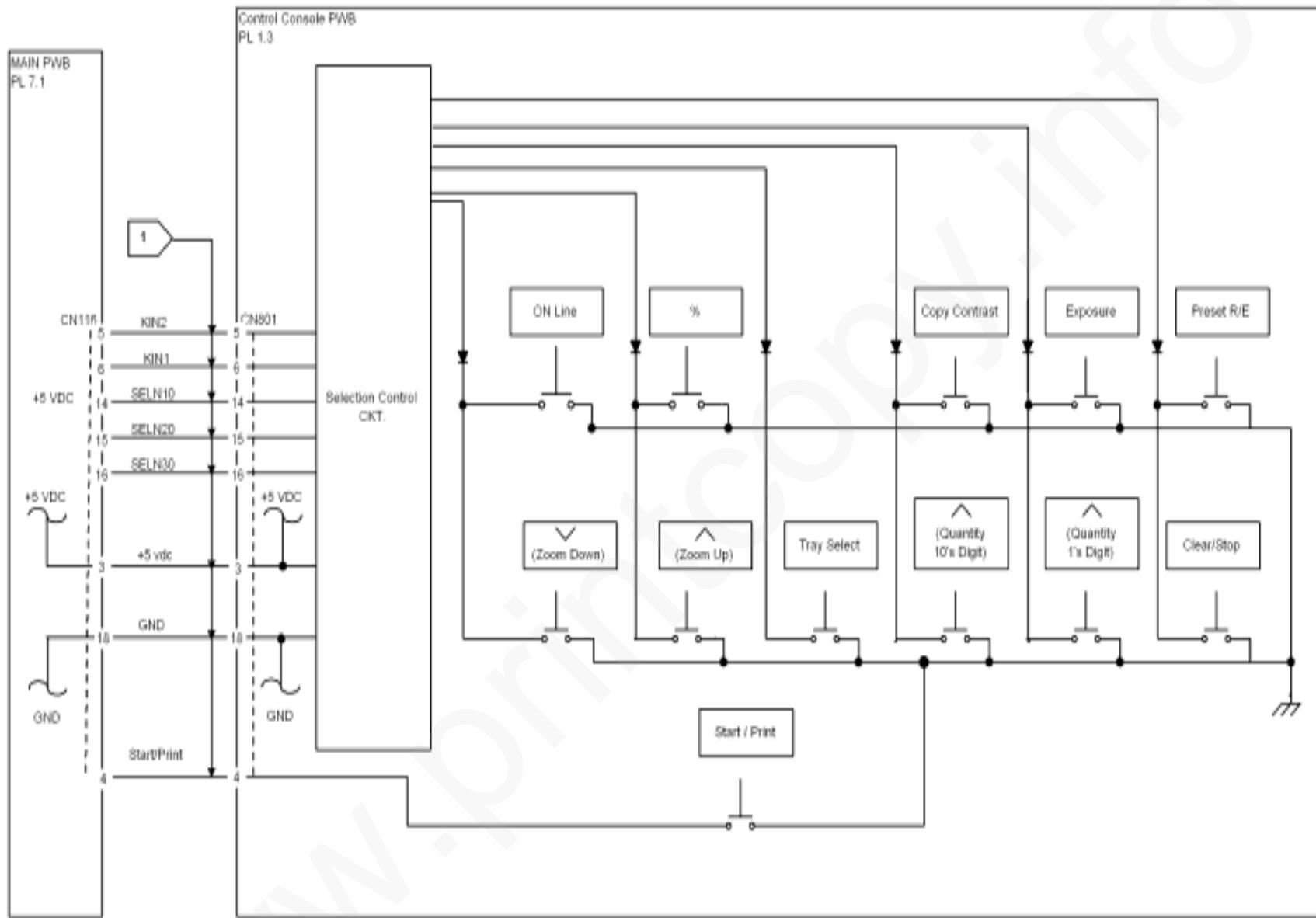


Figure 1 2.2 Selection (With SDF)

4.1 Ventilation Fan Motor RAP (Without SDF)

Procedure

Switch off the power. Switch on the power. There is +24 VDC measured between CN119-1 on the Main PWB and GND.

Y N

Replace the Main PWB, PL 7.1.

The Ventilation Fan is operating at full speed.

Y N

Replace the Step Ventilation Fan MOT3, PL 2.1.

Allow the machine to go into **Power Saver Mode**. The fan is operating at low speed.

Y N

There is approximately +23 VDC measured between CN119-2 on the Main PWB and GND.

Y N

Replace the Main PWB, PL 7.1.

Replace the Ventilation Fan MOT3, PL 2.1.

The Ventilation Fan will switch off once the machine enters the **Auto Shut-off Mode**. If the fan continues to operate, replace the Ventilation Fan MOT3, PL 2.1.

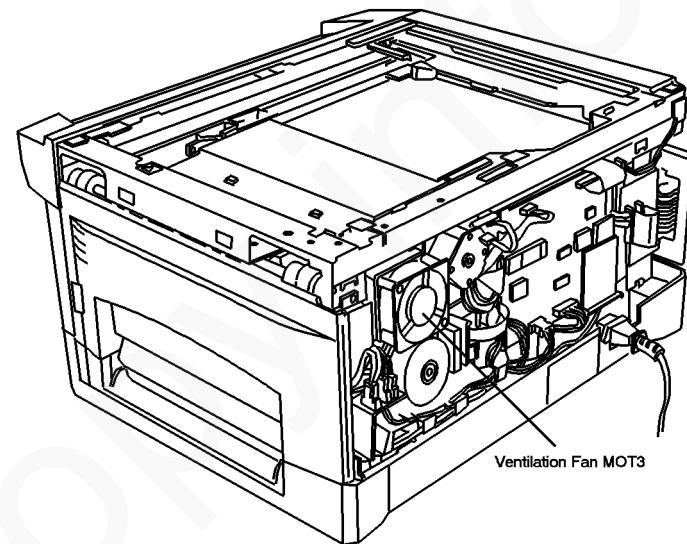
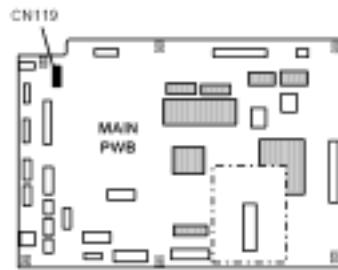


Figure 1 Ventilation Fan MOT3



4.1 Ventilation Fan Motor RAP (With SDF)

Procedure

Switch off the power. Switch on the power. There is +24 VDC measured between CN120-1 on the Main PWB and GND.

Y N

Replace the Main PWB, PL 7.1.

The Ventilation Fan is operating at full speed.

Y N

Replace the Step Ventilation Fan MOT3, PL 2.1.

Allow the machine to go into **Power Saver Mode**. The fan is operating at low speed.

Y N

There is approximately +23 VDC measured between CN120-2 on the Main PWB and GND.

Y N

Replace the Main PWB, PL 7.1.

Replace the Ventilation Fan MOT3, PL 2.1.

The Ventilation Fan will switch off once the machine enters the **Auto Shut-off Mode**. If the fan continues to operate, replace the Ventilation Fan MOT3, PL 2.1.

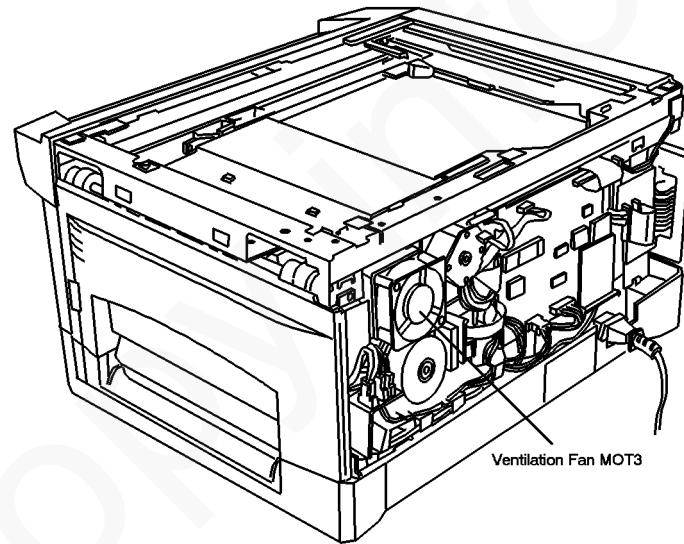


Figure 2 Ventilation Fan MOT3

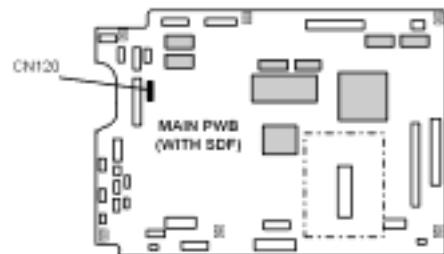


Figure 1 Main PWB (With SDF)

5.1 SDF JAM LED RAP

Initial Actions

If the Auto Start SDF mode is desired, refer to the "Programmable Settings" procedure in (Section 6).

Switch off the Power and clear any document jams. Remove any documents from the SDF.

Procedure

Switch on the power. Enter the diagnostic code **[2-2]**. Actuate the SDF Document Present Sensor. **The Toner Cartridge LED comes on.**

Y N

Go to Flag 1 and check the wires for an open circuit. If the wires are good, check the Set Detector Actuator, PL 9.2 for wear or damage.

If the problem still exists, replace the SDF Sensor PWB, PL 9.2.

Open and then close the SDF Feed Assembly. **The SDF Jam LED comes on and goes off.**

Y N

Go to Flag 2 and check the wires for an open circuit. If the wires are good, replace the SDF Sensor PWB, PL 9.2.

Exit the Diagnostic Mode. With the machine in the Ready condition insert a sheet of paper into the SDF tray. **The SDF Selected LED comes on.**

Y N

The SDF Jam LED comes on or is flashing.

Y N

Check the Set Detector Actuator, PL 9.2 for wear or damage.

The SDF Jam LED is flashing.

Y N

Go to Flag 3 and check the wires for an open or short circuit.

If the wires are good, check that the Document Cover Sensor Q9 is positioned correctly.

If the problem still exists, replace the Document Cover Closed Sensor Q9.

Perform the following:

- Check the SDF Document Path Sensor Q3 for damage and ensure that it is mounted correctly, PL 9.3.
- Go to Flag 4 and check the wires for an short circuit. If the problem continues, replace the SDF Document Path Sensor Q3, PL 9.3.

If the problem still exists, replace the Main PWB, PL 7.1.

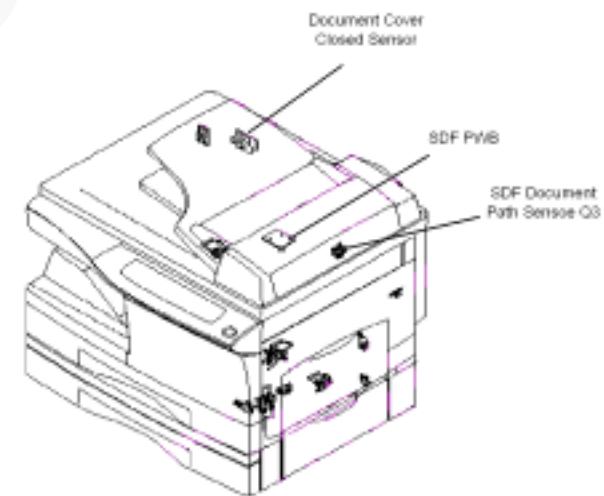
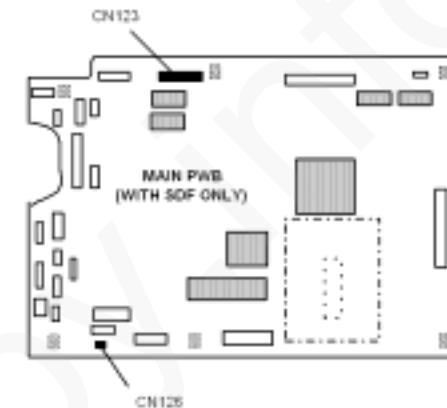
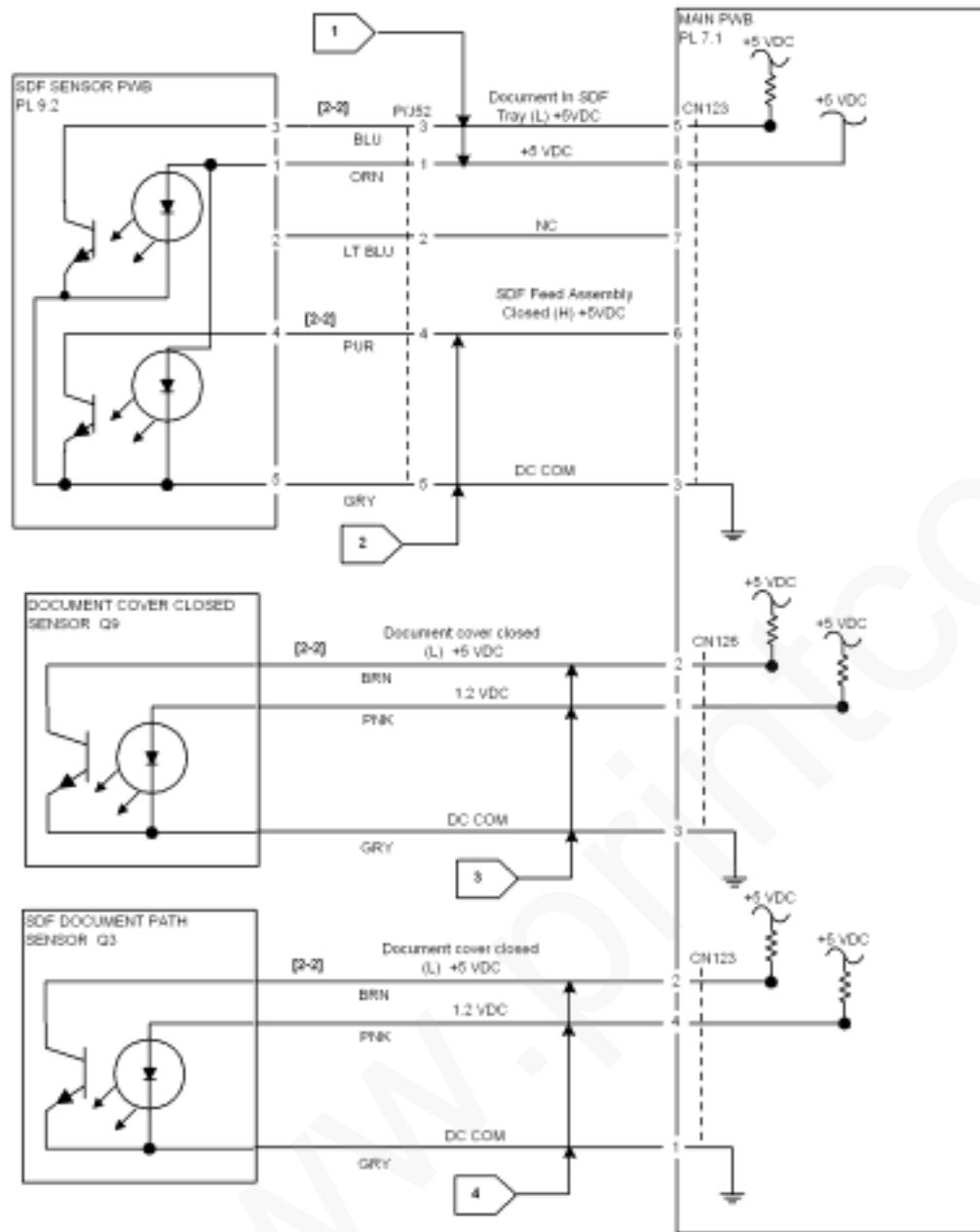


Figure 15.1 SDF Start Circuit

8.1 Paper Tray Ready RAP

Initial Actions

Ensure that the Main Paper Tray and Paper Tray 2 if applicable are closed.

Procedure

With the machine in a ready state, select the Main Paper Tray. **The Main Tray LED is on and not flashing.**

Y **N**

Go to Flag 1 and check the wires for a short circuit. If the wires are good, replace the Tray Detect Switch S2, PL 5.1.

Open the Main Tray. **The Main Tray LED is flashing.**

Y **N**

Go to Flag 1 and check the wires for an open circuit. If the wires are good, replace the Tray Detect Switch S2, PL 5.1.

If applicable select Tray 2. **The Tray 2 LED is on and not flashing.**

Y **N**

Go to Flag 2 and check the wires for a short circuit. If the wires are good, replace the Tray 2 Detect Switch S5, PL 5.8.

Open Tray 2. **The Tray 2 LED is flashing.**

Y **N**

Go to Flag 2 and check the wires for an open circuit. If the wires are good, replace the Tray 2 Detect Switch S5, PL 5.8.

If the problem still exists, replace the Main PWB, PL 7.1.

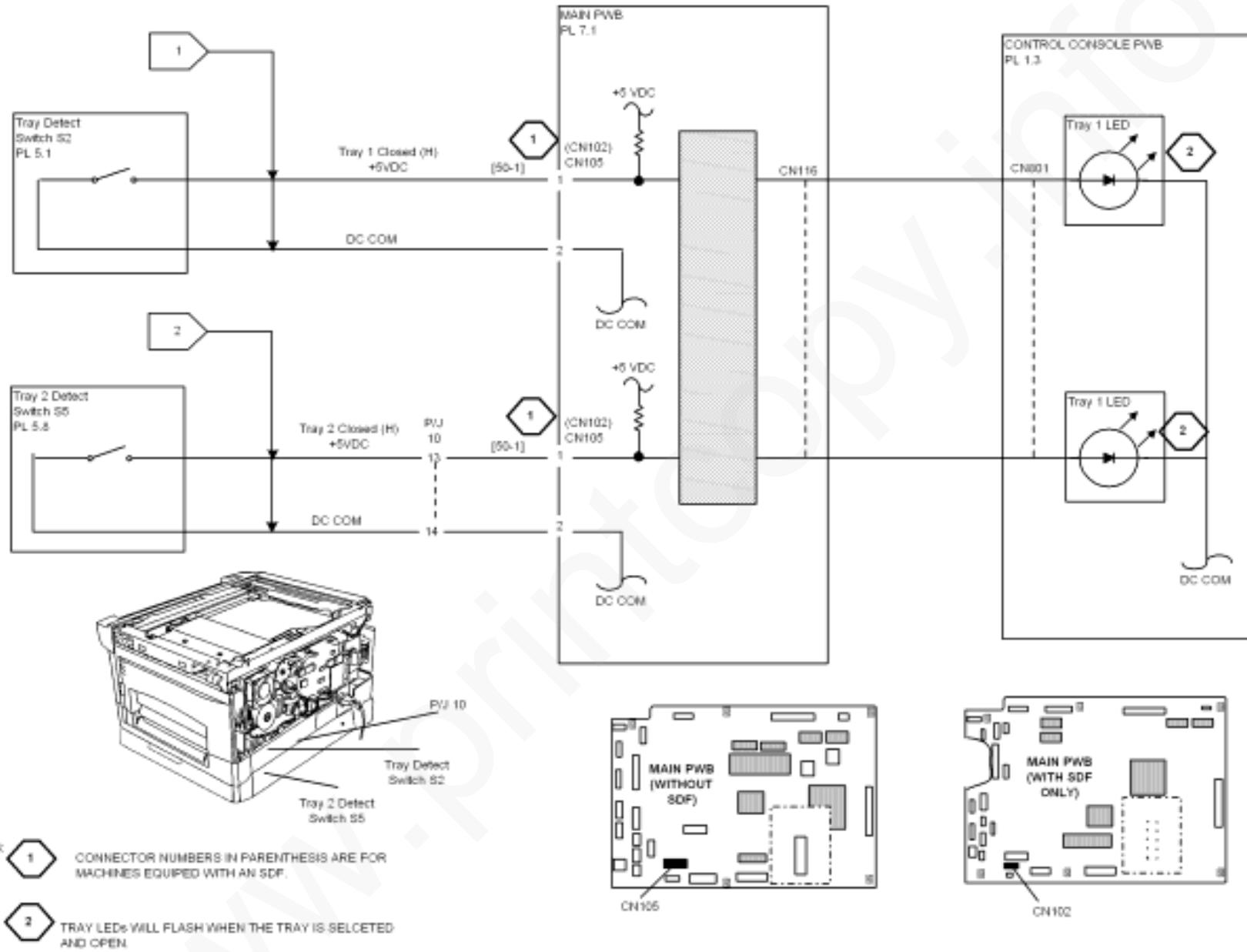


Figure 1 8.1 Paper Tray Interlocks

3 Image Quality

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CQ1 Copy Defect Entry RAP

Copy quality refers to the entire copy. Defects can occur anywhere on the copy. These defects may be damaged paper or image quality defects.

Always eliminate problems which cause the damaged paper before attempting to fix the image quality problems. The damaged paper could cause the image quality problems.

Procedure

Compare the image defect to the Definitions. After you determine which definition best describes the defect, go to the corresponding RAP. The chart which is provided with each RAP lists the Possible Causes and Corrective Actions.

The Possible Causes are arranged in order from the most to the least likely cause or the ease of the check. Corrective Action(s) are given for each cause. Read all of the possible causes before taking any corrective action.

1. Start with the first possible cause and continue through the list until you come to the cause that best applies to the image defect.
2. Perform the corrective action.
3. When the defect is corrected, go to the Copier Maintenance procedures in the Service Call Procedures in Section 1. If the defect is still present, continue with the other Possible Causes.

Definitions

The following terms are commonly used to describe copy quality problems.

Background

(CQ 2 Background (Bands) RAP or CQ 3 Background (Uniform) RAP) Background occurs as darkness or dirtiness on the non-image areas of the copy.

Banding

(CQ 4 Banding RAP) Banding is a condition marked by narrow, alternating dark and light bands that run across the copy, that is, in the main scanning direction.

Black Copy

(CQ5 Black Copy RAP) A copy that is totally black with no image.

Blank copy

(CQ 6 Blank Copy RAP) A copy entirely without an image.

Deletions

(CQ 8 Deletions (LE to TE) RAP) An area of the image where information has been lost. The deletions could be localized or bands from top to bottom or side to side.

Density

(CQ 9 Light Copy RAP) or (CQ 16 Uneven Density RAP) The relative blackness between the image and non-image areas.

Fuser Fix

(CQ 17 Unfused Copy RAP) A measure of how well the toner particles adhere to the paper as a result of the fusing process.

Image Displacement

Part of the image information is placed elsewhere on the copy or it is completely missing. The area of the missing information is sharply defined. This is unlike deletions where the image is not sharply defined or clear.

Image Distortion

(CQ 19 Distortion RAP) Distortion of the image from one side of the copy to the other. The image from side to side or lead edge to trail edge is not parallel to the edges of the copy. This defect may result from a problem with the alignment of the optics components.

Light Image

(CQ 9 Light Copy RAP) Copies where the density is lighter than the specified density of the copier.

Line Darkness

Darkness and uniformity of a line.

Magnification

(CQ 20 Magnification RAP)

Misregistration

(CQ 11 Misregistration RAP) The distance from the lead edge of the image to the lead edge of the paper is not within specification.

Offsetting

Transfer of toner from the copy to the Fuser Assembly Heat Roll. Sometimes the toner is transferred back to the copy or consecutive copies.

Paper Damage

Any physical distortion to the copy paper, including folds, nicks, wrinkles, etc.

Paper Handling

The process of transporting the paper from the supply area through the xerographic and fusing subsystems.

Resolution

(CQ 7 Blurred Image RAP) The uniformity or clarity of fine line detail.

Residual Image

(CQ 12 Residual Image RAP) An image that is repeated onto the same copy or consecutive copies. The image can be either a ghosting or the original image or a toner image. This problem can be caused by poor cleaning of the photoreceptor, a photoreceptor that is worn, a developer roll that is worn, poor cleaning of the fuser.

Skew

(CQ 13 Skew RAP) The image is skewed on the paper. The image from side to side or lead edge to trail edge is not parallel to the edges of the copy. This defect may result from misadjusted, contaminated, or worn paper transportation system components.

Smear

(CQ 14 Skips/Smears RAP) Any image defect that occurs in the direction that is perpendicular to paper feed.

Spots

(CQ 15 Spots RAP) Defects that are 0.2 inches (5 mm) or smaller in diameter.

Streaks

(CQ 10 Lines and Streaks RAP) Any image defect that occurs in the direction of paper feed.

Uneven Density

(CQ 16 Uneven Density RAP) The image darkness varies across the copy.

Unfused copy

(CQ 17 Unfused Copy RAP) A copy on which the image can be easily wiped off the paper. The image has not adhered to the paper.

Wrinkle

(CQ 18 Wrinkle RAP) The paper has very thin creases.

Image Quality Diagnostics

It is important to understand the orientation of copies in order to troubleshoot image quality problems. Refer to Figure 1. The following terms will be used when referring to copies made on the machine.

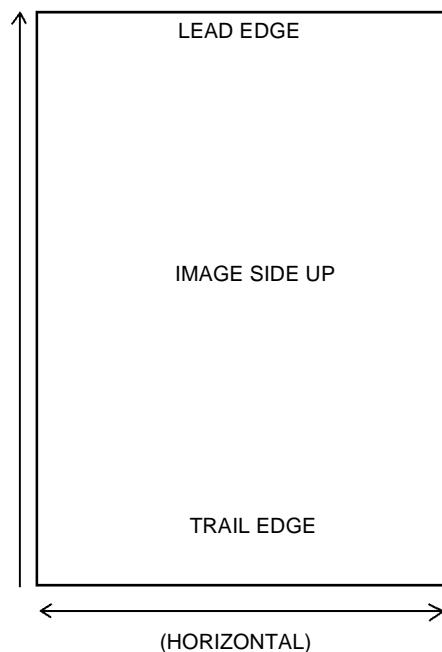


Figure 1 Copy Orientation Terms

Determining the distance between defects may help isolate problems to a specific component. Defects that are 3.1 inches (79 mm) apart (lead edge of the defect to lead edge of next defect) in the paper feed direction could be caused by the photoreceptor. The circumference of the photoreceptor is 3.1 inches (79 mm).

Defects that are 3.7 inches (94 mm) apart (lead edge of defect to lead edge of next defect) in the paper feed direction could be caused by the Fuser Heat Roll. The circumference of the fuser heat roll is 3.7 inches (94 mm).

Defects that are 2.5 inches (64 mm) apart (lead edge of defect to lead edge of next defect) in the paper feed direction could be caused by the Magnetic Roll. The circumference of the Magnetic Roll is 2.5 inches (64 mm).

Image Quality Specification

Test Patterns 82P524 (USCO and XCL) and 82P523 (XL)

The primary test pattern used on this product is the 82P524 (USCO and XCL) or the 82P523 (XL). This test pattern is the Multinational Standard Test Pattern used for the evaluation of the image quality. Side A and Side B are used to evaluate the image quality against different image quality specifications.

- Make four copies of each side of this test pattern in Text mode.
- Evaluate the Side A copies against the specifications provided in Table 1.
- Evaluate the Side B copies against the specifications provided in Table 2.

Test Pattern 82E12130

Use Test Pattern 82E12130 to evaluate Set Document Feeder copy quality problems (skew, misregistration). If the test pattern is not available, position Test Pattern 82P524 (USCO) or 82P523 (XL) on the Document Glass and make an 8-1/2" x 14" (216 x 356 mm) copy. Ensure that the two outside 10 mm reference targets are the identical distance from the edge of the sheet. Use the copy to evaluate SDF copy quality.

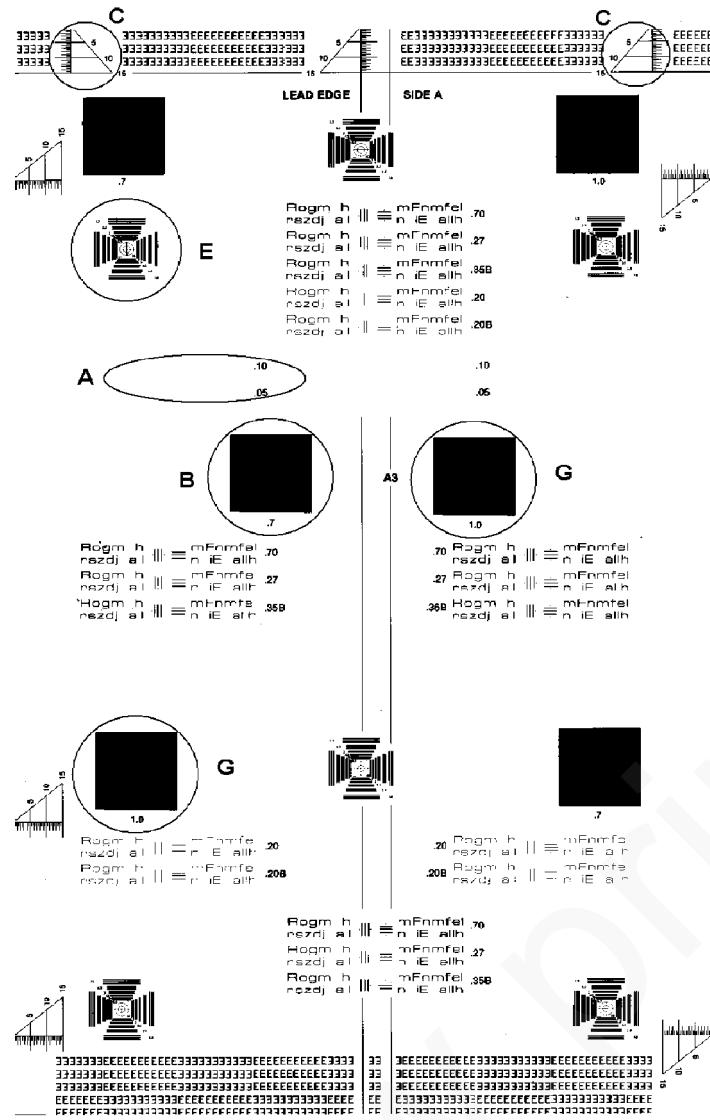


Figure 1 Test Pattern 82P524 (Side A)

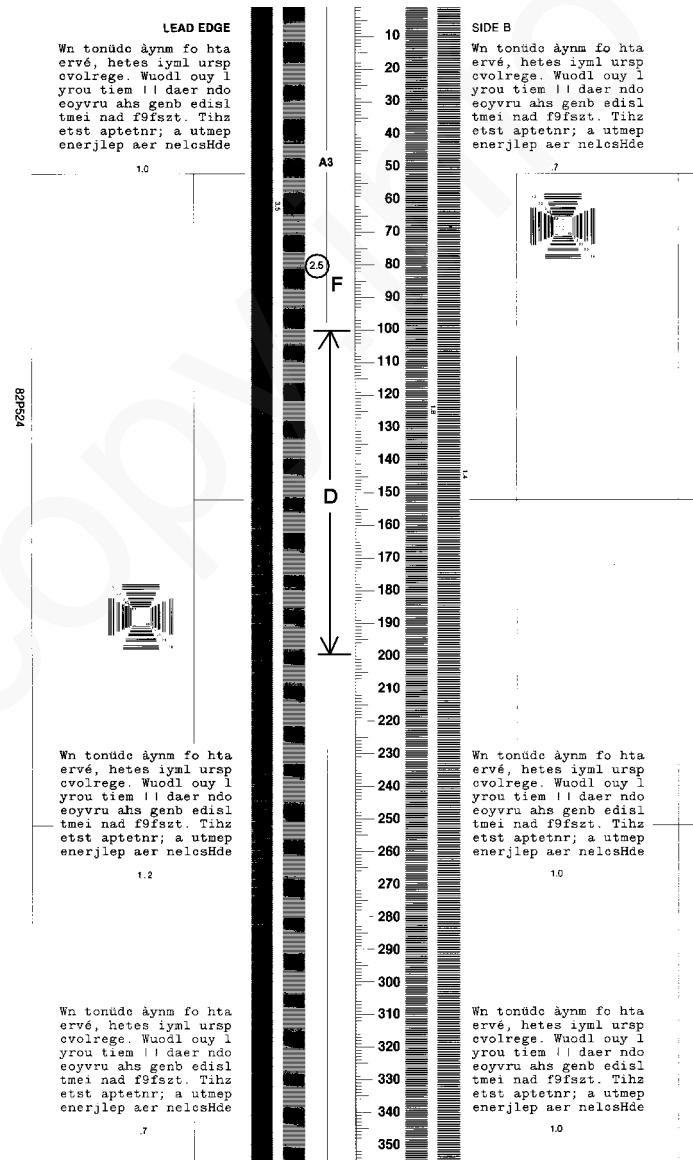


Figure 2 Test Pattern 82P524 (Side B)

Specifications

Using the Side A copies (Test Pattern 82P524)

Table 1

DEFECT	DEFINITION OR SPECIFICATION	REFERENCE
Light Copy	The .7 solid area density block nearest the center of the copy is equal to or greater than the .7 solid area density block on the test pattern. With the dark setting selected, the .10 line pair on the test pattern is partially or completely copied. (This is a guideline only, not a specification.)	Go to CQ 9 Light Copy RAP.
Misregistration (lead edge)	The center 10 mm reference line on the copy should be 10 mm +/-2 mm from the lead edge of a 100% copy.	Go to CQ 11 Misregistration RAP.
Misregistration (side edge)	The 10 mm reference line on the two outside reference targets should be 10 mm +/- 2 mm from the front edge of a 100% copy.	Go to CQ 11 Misregistration RAP.
Skew (Paper Tray 1)	Refer to the two outside reference targets on the copy to ensure that they are within 2 mm with respect to each other. (This is a guideline only, not a specification.)	Go to CQ 13 Skew RAP.
Skew (Paper Tray 2)	Refer to the two outside reference targets on the copy to ensure that they are within 2.5 mm with respect to each other. (This is a guideline only, not a specification.)	Go to CQ 13 Skew RAP.
Skew (Bypass/Alternate Tray)	Refer to the two outside reference targets on the copy to ensure that they are within 2.5 mm with respect to each other. (3.5 mm when using the SDF with the bypass or the alternate tray.) (This is a guideline only, not a specification.)	Go to CQ 13 Skew RAP.
Skew (SDF)	Refer to the two outside reference targets on the copy to ensure that they are within 3 mm with respect to each other. (3.5 mm when using the SDF with the bypass or the alternate tray.) (This is a guideline only, not a specification.)	Go to CQ 13 Skew RAP.
Unfused Copy	Gently rub the .7 patch four times with a paper towel (twice top-to-bottom and twice side-to-side) to determine if unfused toner is present.	Go to CQ 17 Unfused Copy RAP.
Resolution	The 4.3 LP/mm lines of all the resolution targets in both the top-to-bottom direction and the side-to-side direction should be resolved completely. (This is a guideline only, not a specification.)	Go to CQ 7 Blurred Image RAP

Using the Side B copies (Test Pattern 82P524)

Table 2

DEFECT	DEFINITION OR SPECIFICATION	REFERENCE
Skips/smears	The 2.5 LP/mm array for a 100% copy should be completely resolved. (This is a guideline only, not a specification.)	Go to CQ 14 Skips/Smears RAP.
Smudge	After image transfer, the toner image that is not yet fused is rubbed by any part of the machine or foreign material.	Inspect the copy transport area between the Transfer Corotron and the Fuser for the cause of this problem
Magnification	The size of the image on the copy is not equal to the magnification/reduction selected within $\pm 1\%$.	Go to CQ 20 Magnification RAP

Using the customer's original

Table 3

DEFECT	DEFINITION OR SPECIFICATION	REFERENCE
Background	The background area is darker than the corresponding area of a black-and-white original. (Classify the background defect as occurring over the entire copy, as bands in the lead edge to the trail edge direction, or as bands in the front edge to rear edge direction.)	Go to CQ 2 Background (Bands) RAP. Go to CQ 3 Background (Uniform) RAP.

Table 3

DEFECT	DEFINITION OR SPECIFICATION	REFERENCE
Black Bands (Lead Edge To Trail Edge)	Black bands are present from lead edge to trail edge on the copy.	Go to CQ 2 Background (Bands) RAP
Banding (in the main scanning direction)	Narrow, repetitive, tightly packed dark and light bands appear across the copy (in the main scanning direction).	Go to CQ 4 Banding RAP
Black copy	The copy is black; there is no image or only a very faint image on the copy.	Go to CQ5 Black Copy RAP.
Blank / nearly blank copies	The copy is white; there is no image or only a very faint image on the copy.	Go to CQ 6 Blank Copy RAP.
Lines and streaks	One or more dark, light, or white lines appear on the copy.	Go to CQ 10 Lines and Streaks RAP.
Residual image	An electrostatic or toner image is transferred to subsequent copies.	Go to CQ 12 Residual Image RAP.
Spots	Dark toner spots adhere to non-image areas of the copy.	Go to CQ 15 Spots RAP.
Uneven density	Image darkness varies across the width of the copy.	Go to CQ 16 Uneven Density RAP.
Deletions	There is an area of the copy which carries no toner image or a very faint one. The deleted areas may be any shape or randomly distributed over the copy. NOTE: There is an intentional 2-5 mm deletion (maximum) along the lead edge of all the copies. There is an intentional 3-4 mm deletion (maximum) along the trail edge of all the copies. (Classify the deletion defect as random or repetitive spots, as deletions in the lead edge to the trail edge direction, or as deletions in the front edge to rear edge direction.)	Go to CQ 8 Deletions (LE to TE) RAP.

CQ 2 Background (Bands) RAP

Randomly distributed toner deposits of varying density that appear as bands in the non-image areas of the copy.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Contaminated Charge Corotron	Replace the Drum Cartridge (PL 8.2).
Defective Cleaning Blade	Replace the Drum Cartridge (PL 8.2).
Contaminated or defective photoreceptor	Replace the Drum Cartridge (PL 8.2).
Developer/Dry Ink life exceeded.	Replace the Toner Cartridge (PL 8.2).
Contaminated Document Glass	Clean the Document Glass with Lens and Mirror Cleaner and a lint-free cloth.

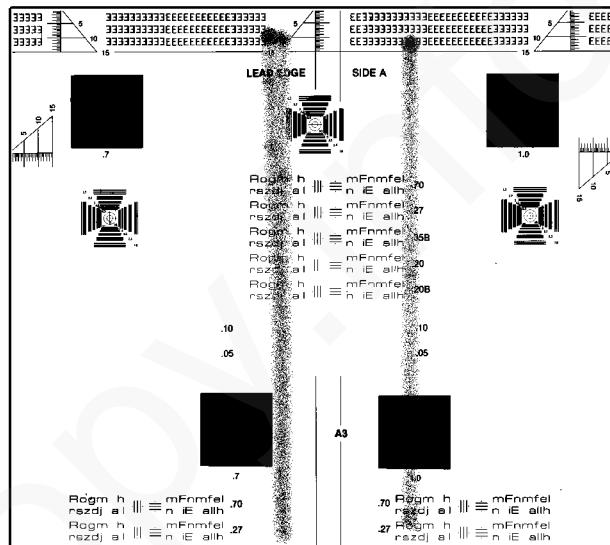


Figure 1 Background Bands

CQ 3 Background (Uniform) RAP

Randomly distributed toner deposits of varying density that evenly cover the non-image areas of the entire copy

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Developer/Dry Ink life exceeded	Replace the Toner Cartridge (PL 8.2).
Defective Charge Corotron	Replace the Drum Cartridge (PL 8.2).
Defective Cleaning Blade	Replace the Drum Cartridge (PL 8.2).
Contaminated or defective photoreceptor	Replace the Drum Cartridge (PL 8.2).
Incorrect developer bias	Check the developer bias contacts for damage.

CQ 4 Banding RAP

Narrow, repetitive, tightly packed dark and light bands appear across the copy (in the main scanning direction).

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Worn photoreceptor drive	Replace the Drum Cartridge (PL 8.2).

CQ5 Black Copy RAP

The copy is totally black with no image.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Defective Exposure Lamp or connections	Replace the Exposure Lamp Carriage (REP 6.2).
Defective Charge Corotron	Remove the Drum Cartridge and clean the electrical contacts. Also wipe the contact wires on the Power Supply PWB. Reinstall the Drum Cartridge. If the problem still exists, replace the Drum Cartridge (PL 8.2).
Defective Power Supply PWB or high voltage connections	Check the Power Supply PWB connections for contamination or damage. If the problem continues, replace the Power Supply PWB (PS1) (REP 1.2).

CQ 6 Blank Copy RAP

This is a copy entirely without an image.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Open photoreceptor ground connection	Check the photoreceptor ground connection.
Open contact for the developer bias.	Check the contacts on the Drum Cartridge for damage or contamination.
Defective Transfer Corotron	Go to GP1 Image on Photoreceptor. If the toner image appears on the photoreceptor, replace the Transfer/Detack Corotron Assembly (REP 9.2).
Main PWB unable to process image data.	Replace the Main PWB (REP 1.1).

CQ 7 Blurred Image RAP

Poor uniformity or clarity of fine line detail. Examine the resolution targets.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Incorrect positioning of mirrors	Check the alignment of the Half-Rate Carriage and the Exposure Lamp Carriage.
Paper feed drives	Check the drives for damage or binding.
Defective Fuser	Replace the Fuser Assembly (REP 10.1).
Defective Drum Cartridge	Remove the Drum Cartridge and clean the electrical contacts. Also wipe the contact wires on the Power Supply PWB. Reinstall the Drum Cartridge. If the problem still exists, replace the Drum Cartridge (PL 8.2).
Dirty electrical connections on the Drum Cartridge or Transfer/Detack Corotron Assembly	Clean the electrical connections with film remover and a lint free cloth.

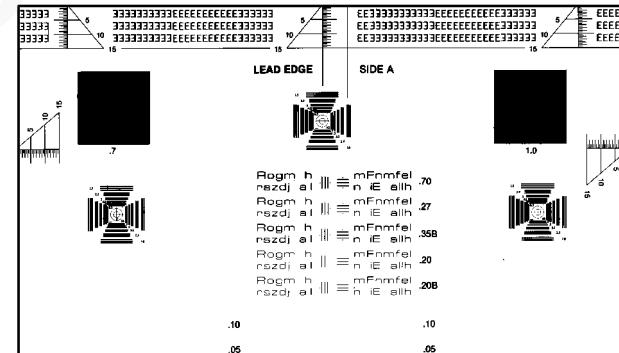


Figure 1 Blurred Image

CQ 8 Deletions (LE to TE) RAP

An area of the image on the copy that has no toner or a very faint image.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Damp paper or paper curled during duplex copying	Use fresh paper and ensure that the customer is storing the paper correctly.
Developer/Dry Ink life exceeded	Replace the Toner Cartridge (PL 8.2).
Contaminated document glass	Clean the Document Glass with Lens and Mirror Cleaner and a lint-free cloth.
Contaminated Transfer/ Detack Corotron Assembly	Clean the Transfer Corotron Wire with the Corotron Cleaner. Clean the Detack Corotron with a soft brush. If the problem still exists, replace the Transfer/Detack Corotron Assembly (REP 9.2).
Contaminated magnetic roll	Replace the Toner Cartridge (PL 8.2).
Contaminated photoreceptor	Replace the Drum Cartridge (PL 8.2).
Toner blockage in Toner Cartridge	Replace the Toner Cartridge (PL 8.2).
Damaged or contaminated fuser heat or pressure roll	Check or clean the rolls or replace the Fuser Assembly (REP 10.1).
Burrs or contamination in the paper transport path	Check and clean components in the paper transport path.
Obstruction in the optics light path	Remove the Document Glass Assembly (REP 6.1) and clean the mirrors 1 through 3 with Lens and Mirror Cleaner and a lint-free cloth.

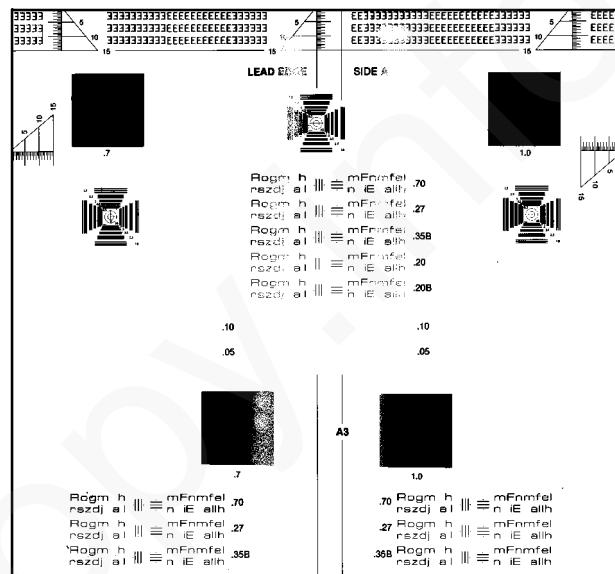


Figure 1 Deletions

CQ 9 Light Copy RAP

The image area of a copy has low density.

Procedure

Read all the Possible Causes. Then select a Corrective Action based on the Possible Cause after a check of the machine.

Possible Cause	Corrective Action
Damp Paper	Use fresh paper and ensure that the customer is storing the paper correctly.
Defective Transfer Corotron	Clean the Transfer Corotron Wire with the Corotron Cleaner. If the problem still exists, replace the Transfer/Detack Corotron Assembly (REP 9.2).
Defective photoreceptor	Remove the Drum Cartridge and clean the electrical contacts. Also wipe the contact wires on the Power Supply PWB. Reinstall the Drum Cartridge. If the problem still exists, replace the Drum Cartridge (PL 8.2).
Developer/Dry Ink life exceeded	Replace the Toner Cartridge (PL 8.2).
Open high voltage return line	Check the photoreceptor ground connection. It should be less than 100 ohms.

CQ 10 Lines and Streaks RAP

Black or white lines which appear in the direction of paper feed.

Procedure

1. Clean the Document Glass with Lens and Mirror Cleaner and a lint-free cloth.

NOTE: Copies with lines or streaks which are caused by dirt or contamination on the Number 1 Mirror, the CCD Window, the Calibration Strip or the Laser Assembly Focus Correction Lens are more visible when the original contains halftones, photographs, or solid areas. Figure 1

2. Position the customer's original on the Document Glass, select the **Auto** exposure setting, and make one copy at 100 percent magnification and one copy at 78 percent magnification.
3. Evaluate the copies for the presence of lines or streaks caused by contamination:
 - a. If the position of the line(s) on the 100 percent and 78 percent copies changes relative to the edges of the copy paper, the contamination is in the optics area, that is, before image processing. Perform the corrective actions listed in Table 1.
 - b. If the position of the line(s) on the 100 percent and 78 percent copies does not change relative to the edges of the copy paper, the contamination is on the Focus Correction Lens, that is, after image processing. Perform the corrective actions listed in Table 2.

Run additional copies of the customer's original to determine if the problem is solved. If not, go to Table 3 and continue checking for the possible cause.

Table 1 Contamination Before Image Processing

Possible Cause	Corrective Action
Contamination on Mirror Number 1	<p>Remove the Document Cover Assembly and the Document Glass Assembly (REP 6.1).</p> <p>Gently clean the mirror using a dry cotton swab. Be careful that fibers from the swab are not left on the mirror. For stubborn contamination, clean the mirror with Lens and Mirror Cleaner and a lint-free cloth.</p> <p>Clean and replace the Document Glass and the Document Cover Assembly.</p>
Contamination on the CCD Window	<p>Remove the Document Cover Assembly and the Document Glass Assembly (REP 6.1), then remove the Lens Cover and the CCD Dust Cover.</p> <p>CAUTION: Use only Film Remover to clean the plastic CCD Window; other solvents may damage it.</p> <p>Moisten a swab with Film Remover and gently rub it across the CCD Window to remove contamination.</p> <p>Replace the CCD Dust Cover, the Lens Cover, the Document Glass, and the Document Cover Assembly.</p>
Contamination on the Calibration Strip	<p>Remove the Document Cover Assembly and the Document Glass (REP 6.1).</p> <p>Clean the Calibration Strip with Film Remover and a lint free cloth.</p> <p>Replace the Document Glass and the Document Cover Assembly.</p>

Table 2 Contamination After Image Processing

Possible Cause	Corrective Action
Contamination on Focus Correction Lens	<p>Remove the Drum Cartridge and the Toner Cartridge (PL 8.2).</p> <p>Remove dust or toner deposits from the exposed surface of the lens with a dry cotton swab.</p> <p>Replace the Toner Cartridge and the Drum Cartridge.</p>

Table 3 Other Possible Causes/Corrective Actions

Possible Cause	Corrective Action
Contaminated Transfer Corotron Wire	Clean the Transfer Corotron Wire with the Corotron Cleaner.
The photoreceptor surface is damaged or contaminated	Determine the cause of the damage. Replace the Drum Cartridge (PL 8.2).
Poor cleaning of the photoreceptor	Replace the Drum Cartridge (PL 8.2).
The surface of the Fuser Heat Roll is damaged	Determine the cause of the damage. Replace the Heat Roll (REP 10.2).
Contaminated Charge Corotron	Replace the Drum Cartridge (PL 8.2).
Defective photoreceptor ground	Check the photoreceptor ground connection. It should be less than 100 ohms.

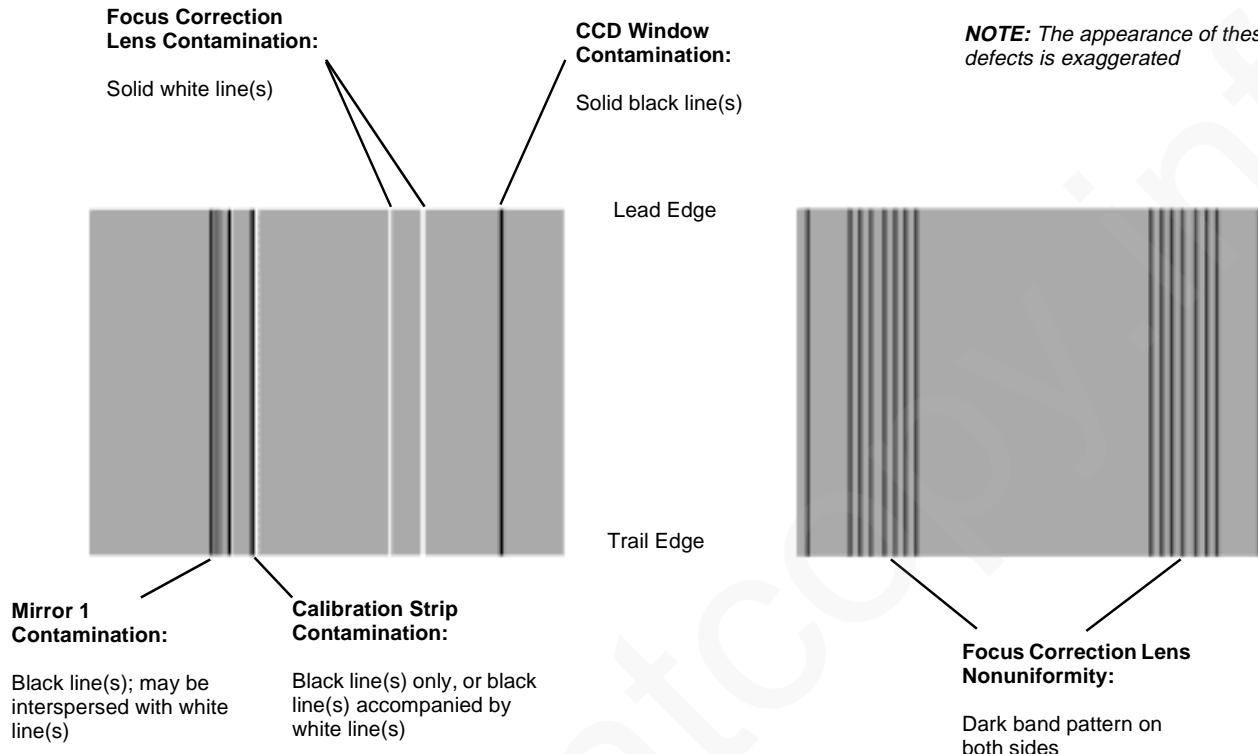


Figure 1 Line Defects: Optics Contamination and Nonuniform Focus Correction Lens (Simulates Appearance Using .45 Contrast Density Test Pattern 186.904)

CQ 11 Misregistration RAP

Paper Tray 1 and 2 Lead Edge: The center 10 mm reference line on the copy should be 10 mm +/- 1.0 mm from the lead edge of a 100% copy.

Paper Tray 1 and 2 Side Edge: The 10 mm line on the two outside reference targets should be 10 mm +/- 2.0 mm from the front edge of a 100% copy.

Bypass/Alternate Tray Lead Edge: The 10 mm line on the lead edge graduated mm scale is a maximum of 10 mm +/- 3.2 mm from the lead edge of the copy.

Bypass/Alternate Tray Side Edge: The 10 mm line on the side edge graduated mm scale is a maximum of 10 mm +/- 3.2 mm from the side edge of the copy.

Set Document Feeder Side Edge: The 10 mm reference line on the two outside reference targets should be 10 mm +/- 3.4 mm from the front edge of a 100% copy.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Lead Edge Misregistration

Possible Cause	Corrective Action
Incorrectly loaded paper	Show the customer how to load paper.
Damaged or worn paper feeding components.	Clean the feed and the registration rolls with Film Remover and a lint-free cloth. Check the components for wear or damage.
Defective Registration Roll Solenoid (SOL3)	Enter Output Code 6-[2] to test the operation of the solenoid. Replace the solenoid if it binds or fails to actuate (REP 8.2).
Incorrect value in [50-01] for the Print Start Position, the Lead Edge Deletion, or the Scan Start Position	The default lead edge deletion is 2.5 mm. Perform the Print Start Position, Lead Edge Deletion, and Scan Start Position adjustments in the Section 6 Adjustment Codes.

Side Edge Misregistration

Possible Cause	Corrective Action
The side guide in the paper tray is not positioned correctly	Position the side guide correctly.
Incorrect value in 50-01 for center offset	Perform the Center Offset Adjustment procedure in the Section 6 Adjustment Codes.

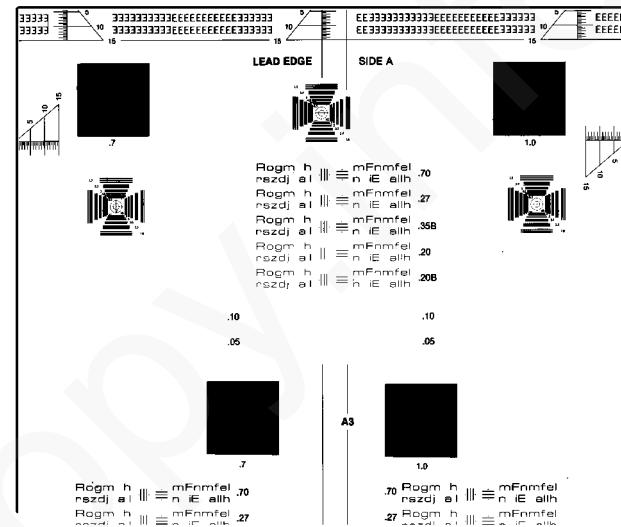


Figure 1 Lead Edge Misregistration

CQ 12 Residual Image RAP

This is an image that is repeated on the same copy or consecutive copies.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Image repeated every 3.1 inches (79 mm) on copy	Replace the Drum Cartridge (PL 8.2).
Image repeated every 3.7 inches (94 mm) on copy	Replace the Heat Roll (REP 10.2).
Poor cleaning of the photoreceptor	Replace the Drum Cartridge (PL 8.2).

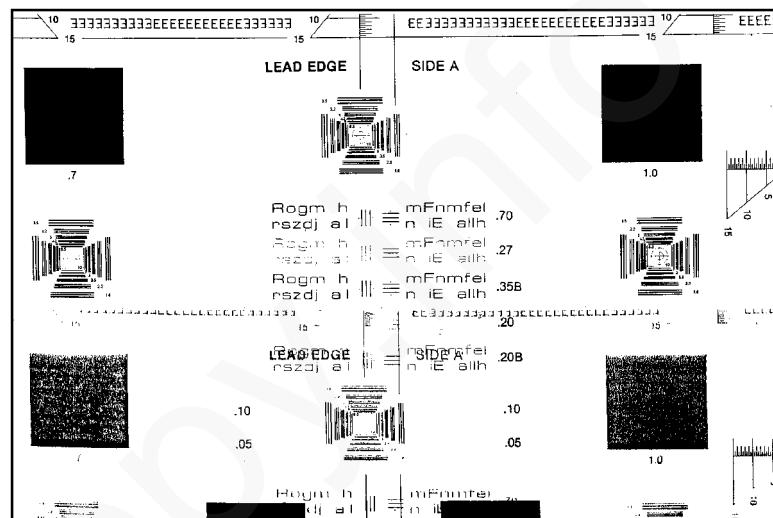


Figure 1 Residual Image

CQ 13 Skew RAP

The image is skewed because the paper is skewed or the optics components are misadjusted and distort the image.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Paper Tray problem	<p>Check the condition of the front and rear paper tray snubbers. Repair as required (PL 4.1).</p> <p>Ensure the paper tray guides are correctly set. Repair as required (PL 4.1).</p>
The paper is not loaded correctly.	Show the customer how to load paper.
Damaged or contaminated paper feed rollers, registration roller, or transport rollers	<p>Clean the paper feed and the registration rollers, and the Single Bypass Transport Rollers with Film Remover and a lint-free cloth. Check the components for wear or damage. Replace as required.</p> <p>The Paper Feed Roller (REP 8.6) and the Lower Registration Roller (REP 8.13)</p> <p>The Exit Roller (REP 8.9) and the Lower Transport Roller (REP 8.11)</p> <p>The Transport Roller (REP 8.7)</p>
Incorrect setting in 51-[2]	Perform the Registration Buckle adjustment in the Section 6 Adjustment Codes.
Optics problem	Go to CQ 19 Distortion RAP.
Worn or contaminated SDF Retard Roller, Feed Roller, or Transport Roller	Clean the rollers with Film Remover and a lint-free cloth. Check the components for wear or damage. Replace as required.
SDF Front and Rear Guides incorrectly positioned	Show the customer how to load originals in the SDF.
Obstruction in the SDF document path	Open the SDF Feed Assembly and check for obstructions. Remove any obstructions which are present.

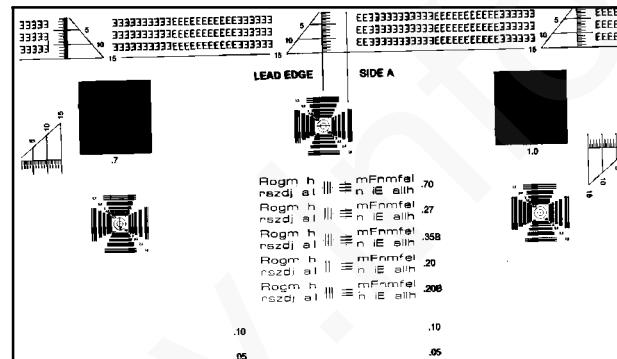


Figure 1 Skew

CQ 14 Skips/Smears RAP

Areas of the image on the copy are blurred. This occurs at the image transfer area.

The 2.5 LP/mm ladder lines are not completely clearly visible.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Defective Transfer/Detack Corotron Assembly	Replace the Transfer/Detack Corotron Assembly (REP 9.2).
Worn or damaged paper feed components.	<p>Clean the paper feed and registration rollers, and Single Bypass Transport Roller with Film Remover and a lint-free cloth. Check the components for wear or damage. Replace as required:</p> <p>The Paper Feed Roller (REP 8.6) and the Lower Registration Roller (REP 8.13)</p> <p>The Exit Roller (REP 8.9) and the Lower Transport Roller (REP 8.11)</p> <p>The Transport Roller (REP 8.7)</p>
Contaminated or damaged scan rails	<p>Remove the Document Cover Assembly and the Document Glass Assembly (REP 6.1). Do not remove any other components in the optics area. Clean the carriage rails with a lint free towel.</p> <p>Replace the half rate carriage scan rails if they are damaged (PL 3.1).</p>
Damp or curled paper	Use fresh paper and ensure that the customer is storing the paper correctly.
Dirty electrical connections on the Drum Cartridge or the Transfer/Detack Corotron Assembly	Clean the connections with film remover and a lint free cloth as required.

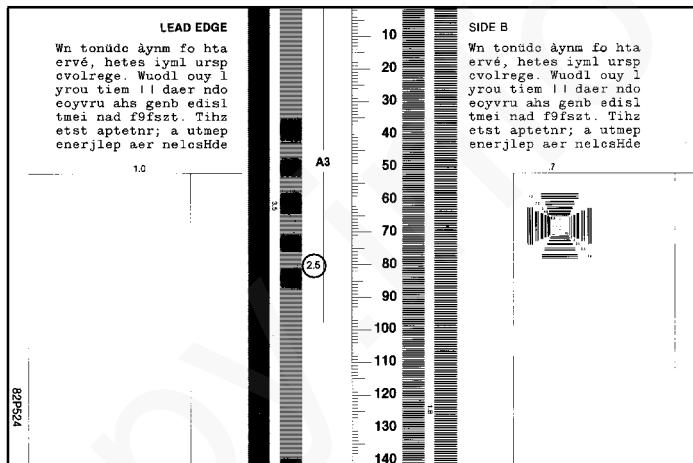


Figure 1 Skips and Smears

CQ 15 Spots RAP

Circular black spots or irregular shaped black images on the copy.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Contaminated document glass	Clean the Document Glass with Lens and Mirror Cleaner and a lint-free cloth.
Damp or wrinkled paper	Use fresh paper and ensure that the customer is storing the paper correctly.
Defective, damaged or contaminated photoreceptor	Replace the Drum Cartridge (PL 8.2).
Contaminated fuser heat roll	Replace the Heat Roll (REP 10.2).
Worn magnetic roll	Replace the Toner Cartridge (PL 8.2).
Contaminated Registration Roll	Clean the Registration Roll.

SIZE OF BACK-GROUND SPOT	MAXIMUM ALLOWABLE SPOTS	
	ANY 2 INCH DIAMETER CIRCLE	8 1/2 X 11 COPY AREA
 0.021" TO 0.030"	1	2
 0.016" TO 0.020"	1	7
 0.011" TO 0.015"	6	25
 0.006" TO 0.010"	12	NOT SPECIFIED

Figure 1 Spots

CQ 16 Uneven Density RAP

The density and line thickness vary across the copy.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Defective or contaminated photoreceptor	Replace the Drum Cartridge (PL 8.2).
Contaminated Transfer Corotron	Clean the Transfer Corotron Wire with the Corotron Cleaner (PL 5.3). If the problem still exists, replace the Transfer/ Detack Corotron Assembly (REP 9.2).
Developer/Dry Ink life exceeded	Replace the Toner Cartridge (PL 8.2).
Low toner	Replace the Toner Cartridge (PL 8.2).
Dirty Mirrors	Remove the Document Cover Assembly and the Document Glass Assembly (REP 6.1) and clean the mirrors 1 through 3 with Lens and Mirror Cleaner and a lint-free cloth.

CQ 17 Unfused Copy RAP

The characters or image are easily wiped off a copy.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Damp Paper	Use fresh paper and ensure that the customer is storing the paper correctly.
Incorrect Fuser temperature	Ensure that the Fuser temperature is set correctly for the customer paper that is used most often. Heavy weight paper may require a higher temperature. Light weight paper may require a lower temperature. Refer to the appropriate parameter adjustment table in Section 6: <ul style="list-style-type: none">- Adjustment Codes- Programmable Features Settings- Configuration Codes
Defective Fuser Heat or Pressure Roll	Replace the Fuser Assembly (REP 10.1).

CQ 18 Wrinkle RAP

This is damage that is probably caused by the Fuser. This is a severe case of creases that run in the direction of paper travel.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

NOTE: Wrinkles may occur when envelopes are run. Refer to the User Guide for information on running envelopes.

Possible Cause	Corrective Action
Damp paper	Use fresh paper and ensure that the customer is storing the paper correctly.
Damaged or contaminated paper feed rollers, registration roller, or transport rollers	Clean all of the paper feed and transport rollers with Film Remover and a lint-free cloth. Check the components for wear or damage.
Damaged or contaminated Fuser Heat Roll or Pressure Roll	Replace as required either the Heat Roll (PL 6.1) (REP 10.2), the Pressure Roll (PL 6.2)(REP 10.3), or both.

CQ 19 Distortion RAP

Two types of image distortion can be attributed to misadjustment of the optics components - horizontal image distortion (Figure 1) and vertical image distortion (Figure 2).

NOTE: Perform the checks in CQ 13 Skew RAP before checking the optics components.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Half Rate Carriage or Exposure Lamp Carriage misadjusted	Go to ADJ 6.7 Image Distortion (Horizontal and Vertical).
The Left or the Right Half Rate Carriage Scan Rail is misadjusted	Go to ADJ 6.7 Image Distortion (Horizontal and Vertical).

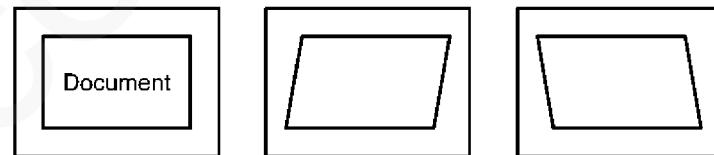


Figure 1 Horizontal Image Distortion Examples

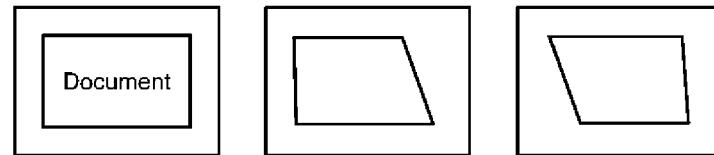


Figure 2 Vertical Image Distortion Examples

CQ 20 Magnification RAP

The image on the copy is not within specification for the selected magnification.

Initial Actions

Replace the copy paper with a new supply.

Ensure that the optics are clean.

Procedure

Read all the Possible Causes. Then check the machine for the possible cause and perform the Corrective Action.

Possible Cause	Corrective Action
Incorrect value in 48- [1]	If the Lens/CCD Module was removed, reinstall it to the reference position (ADJ 6.2). Perform ADJ 6.7 Image Distortion (Horizontal and Vertical). Perform ADJ 6.8 Image Magnification.
Image Processing Problem	Replace the Main PWB (REP 1.1).

4. Repair / Adjustment

Repairs

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Notes:

REP 1.1 Main PWB

Parts List on PL 7.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the six screws and the PWB Cover (PL 7.1).
4. Disconnect all the Ribbon Cables and Harness from the Main PWB.
5. Remove the six mounting screws and the Main PWB.

Replacement

1. If the Main PWB is being replaced, carefully remove the EPROM and the GDI Memory PWB from the old PWB and install them onto the new PWB.
2. Reassemble the Copier.
3. If the Main PWB has been replaced, perform the following:
 - a. Copy Density (ADJ 6.1)
 - b. Image Magnification (ADJ 6.8)

REP 1.2 Power Supply PWB (PS1)

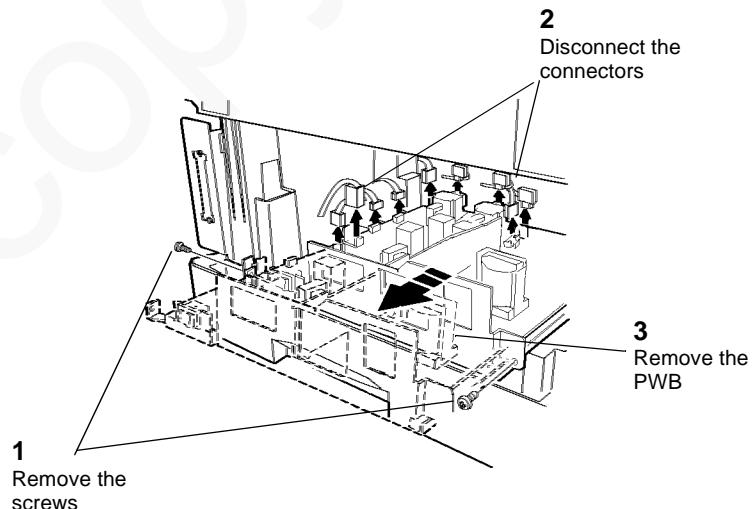
Parts List on PL 7.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Top Left Cover.
4. Remove the Output Tray (REP 14.7).
5. Move the Power Receptacle (REP 1.4).
6. (Figure 1): Remove the Power Supply PWB.



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Figure 1 Removing the Power Supply PWB

REP 1.3 Control Console PWB

Parts List on PL 1.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Control Console (REP 14.5).
2. (Figure 1): Remove the Control Console PWB.

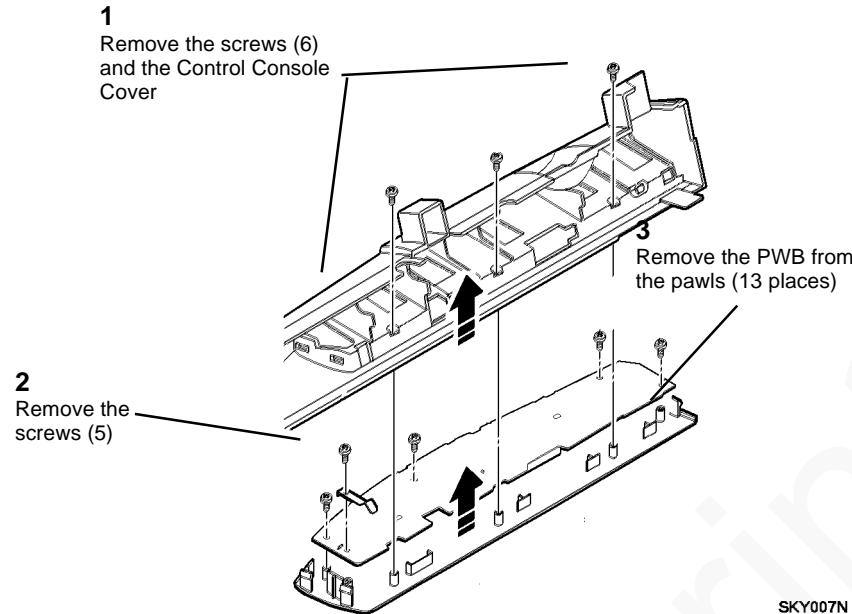


Figure 1 Removing the Control Console PWB

REP 1.4 Power Receptacle

Parts List on PL 7.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Top Left Cover.
4. Remove the Output Tray (REP 14.7).

NOTE: The Power Receptacle is wired to the Power Supply PWB. This procedure shows how to detach it from the Base Assembly.

5. (Figure 1): Move the Power Receptacle from its position on the Base Assembly.

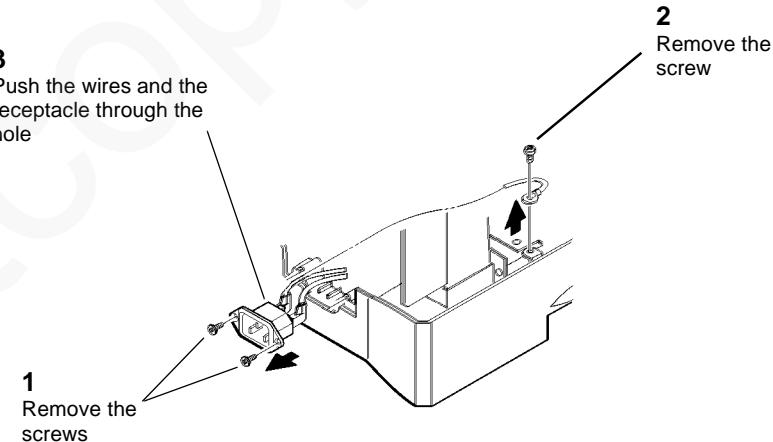


Figure 1 Moving the Power Receptacle

REP 4.1 Main Drive Motor (MOT1)

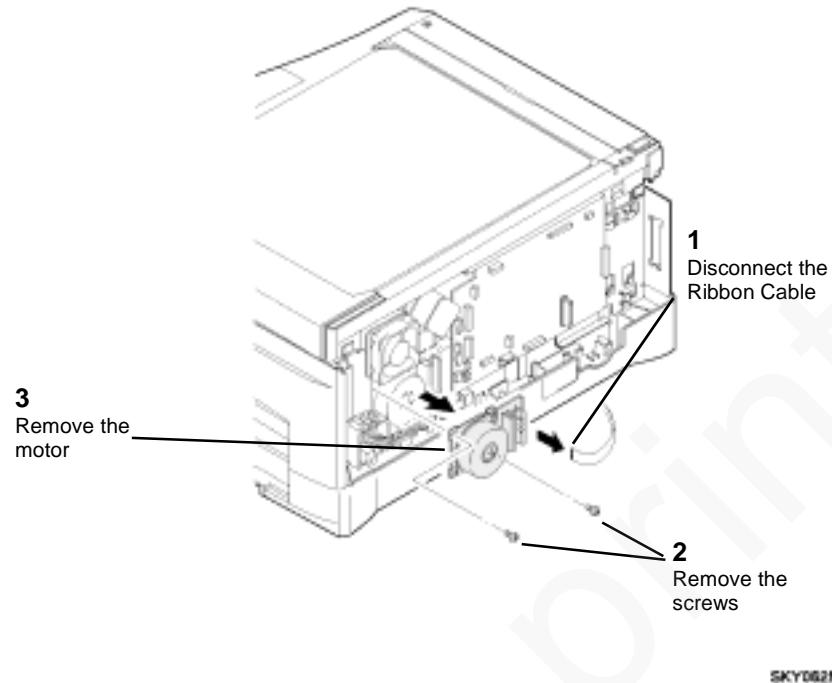
Parts List on PL 2.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. (Figure 1): Remove the Main Drive Motor.



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Figure 1 Removing the Main Drive Motor

Notes:

REP 5.1 SDF Assembly

Parts List on PL 9.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Rear Cover.
2. Remove the six screws and the PWB Cover (PL 7.1).

NOTE: Cut cable ties or release cable clamps as necessary.

3. Disconnect the ground wire and cable coming from the SDF Assembly.
4. Lift the SDF Assembly up slowly off the Document Glass. While tilting the hinges in the rear direction, lift the hinges out of the hinge guides.

REP 5.2 SDF Sensor PWB

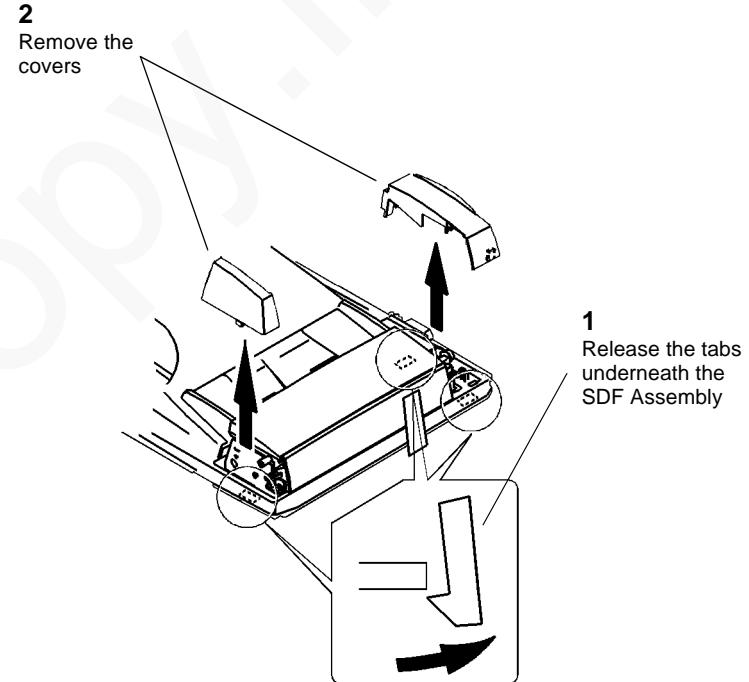
Parts List on PL 9.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

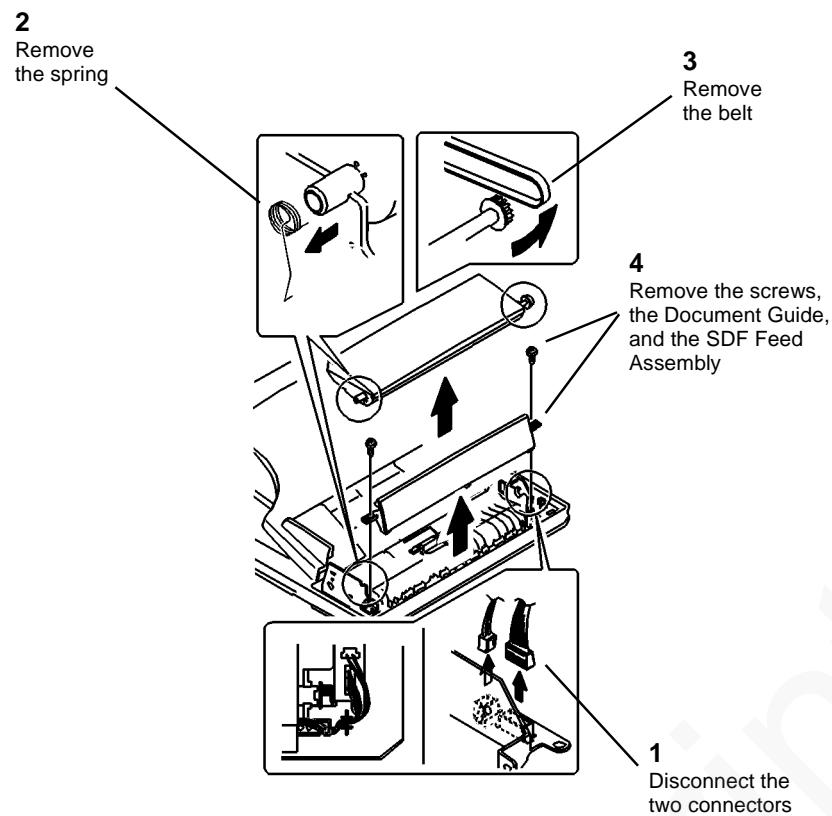
1. (Figure 1): Remove the Front Cover and the Rear Cover.



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Figure 1 Removing the Covers

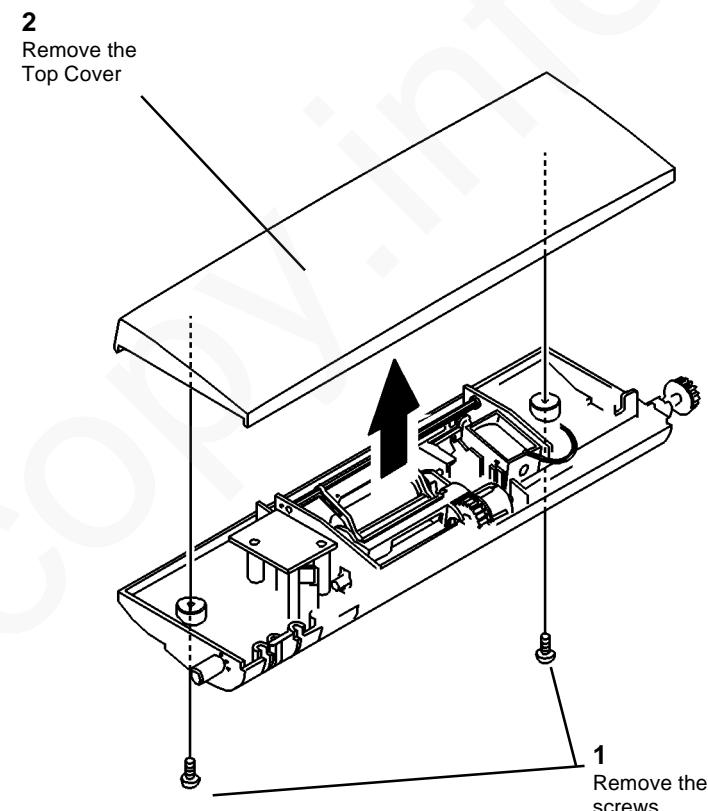
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

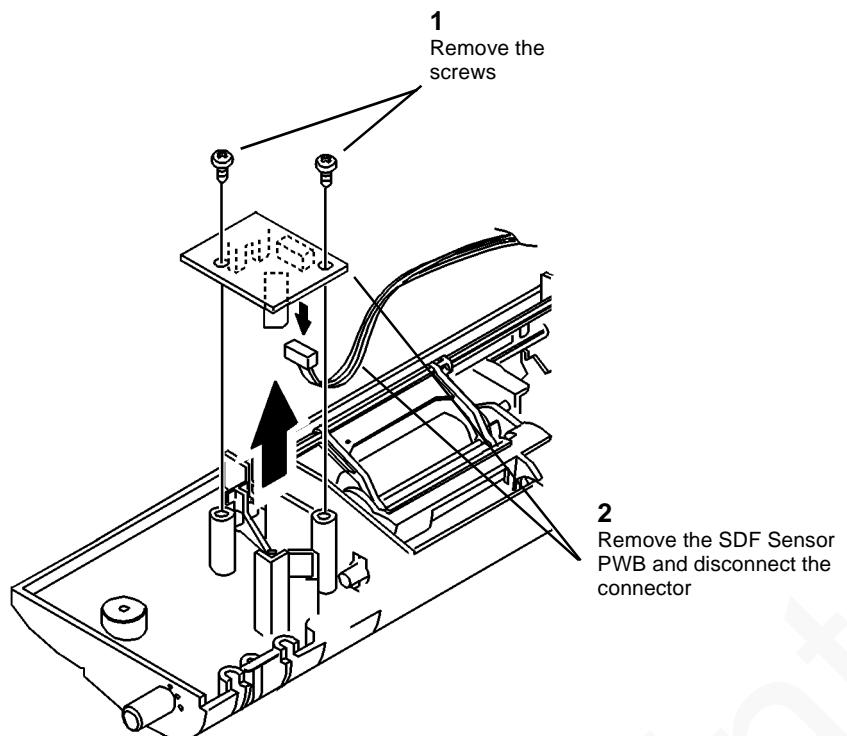
3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the SDF Sensor PWB.



0500004A-SKY

Figure 4 Removing the SDF Sensor PWB

REP 5.3 Feed Solenoid (SOL1)

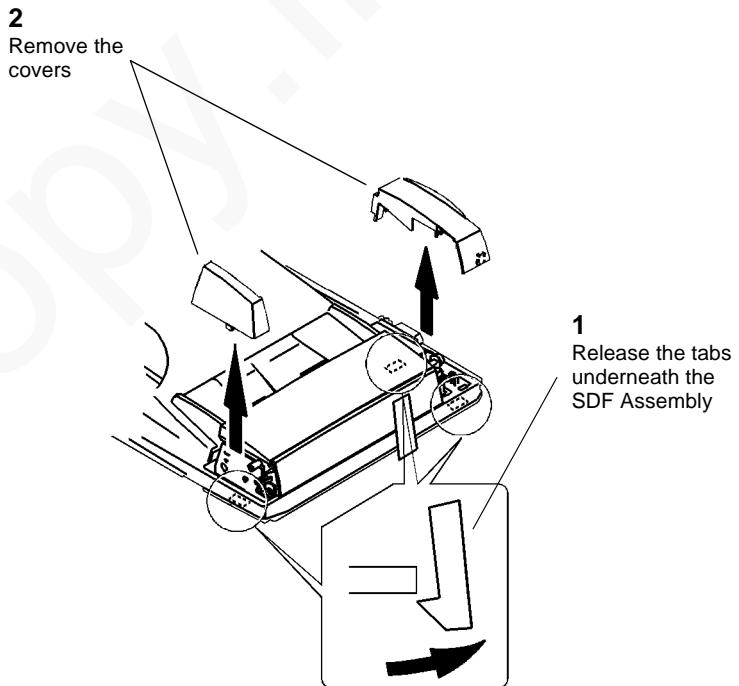
Parts List on PL 9.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

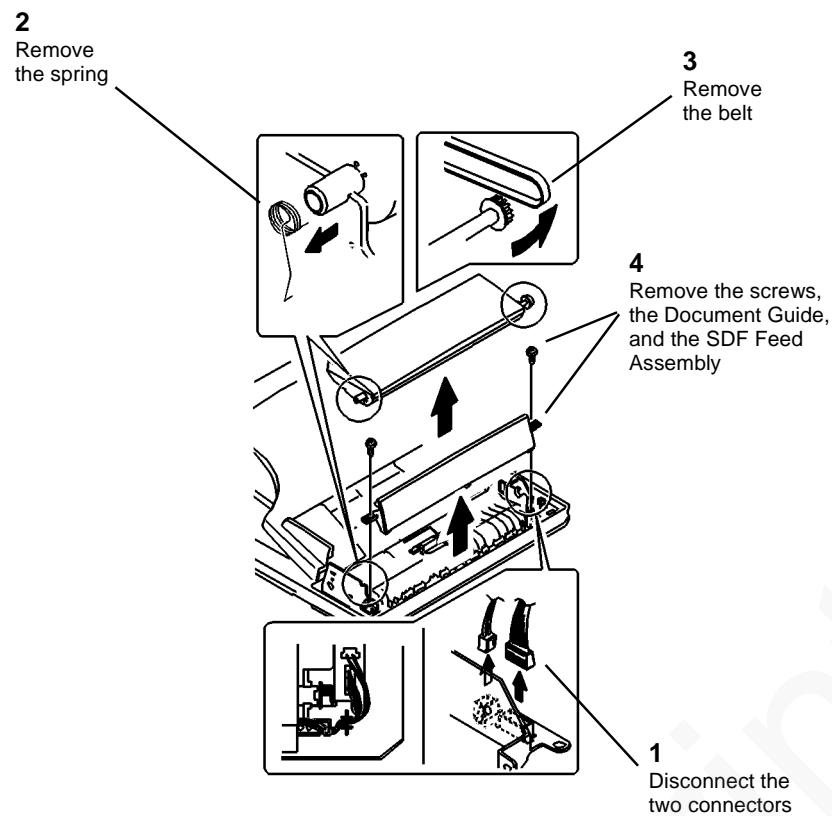
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

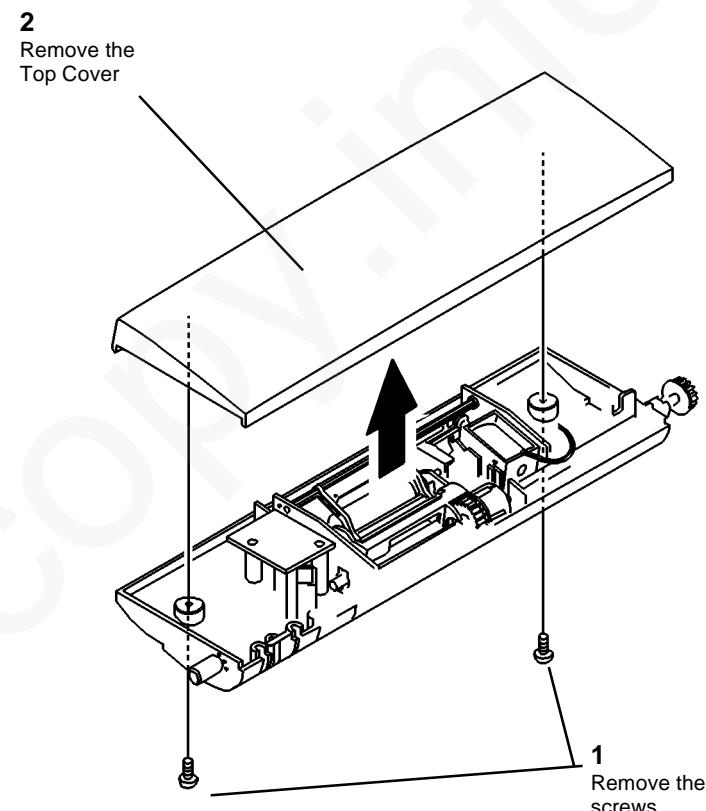
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

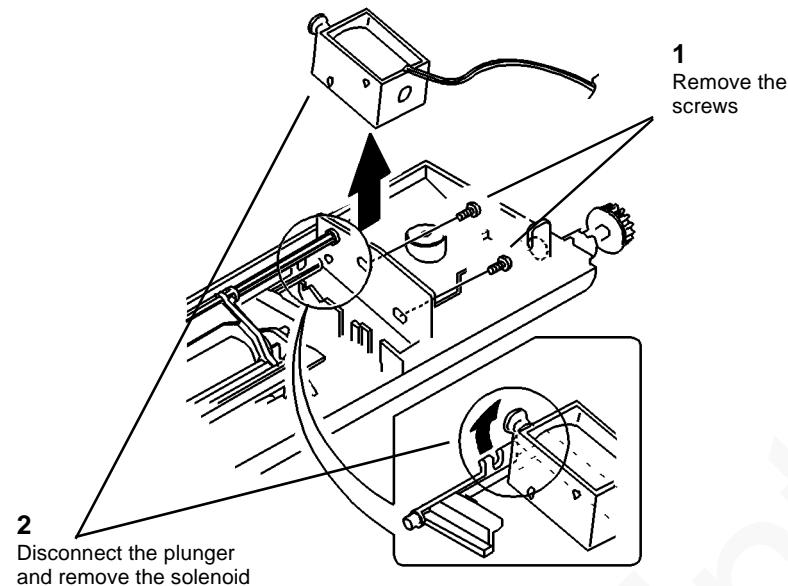
3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the Feed Solenoid.



REP 5.4 Clutch

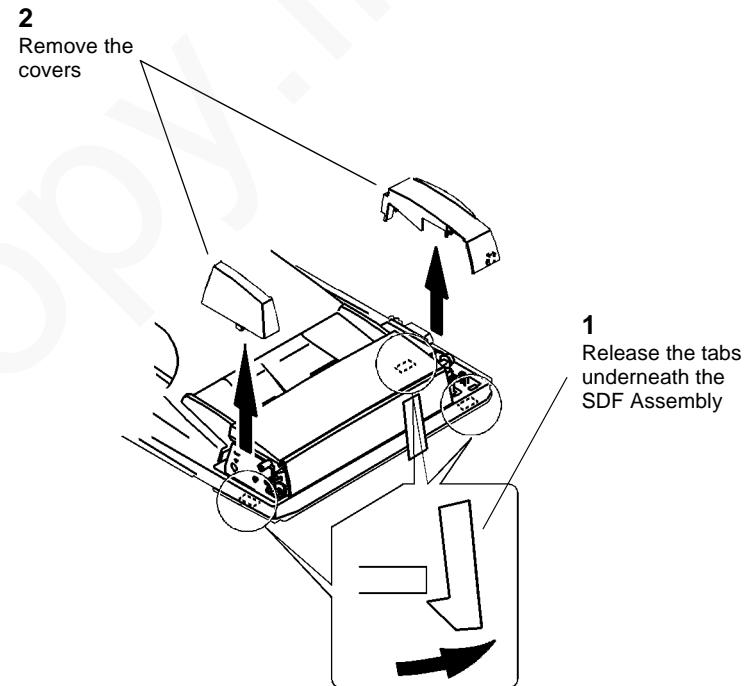
Parts List on PL 9.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



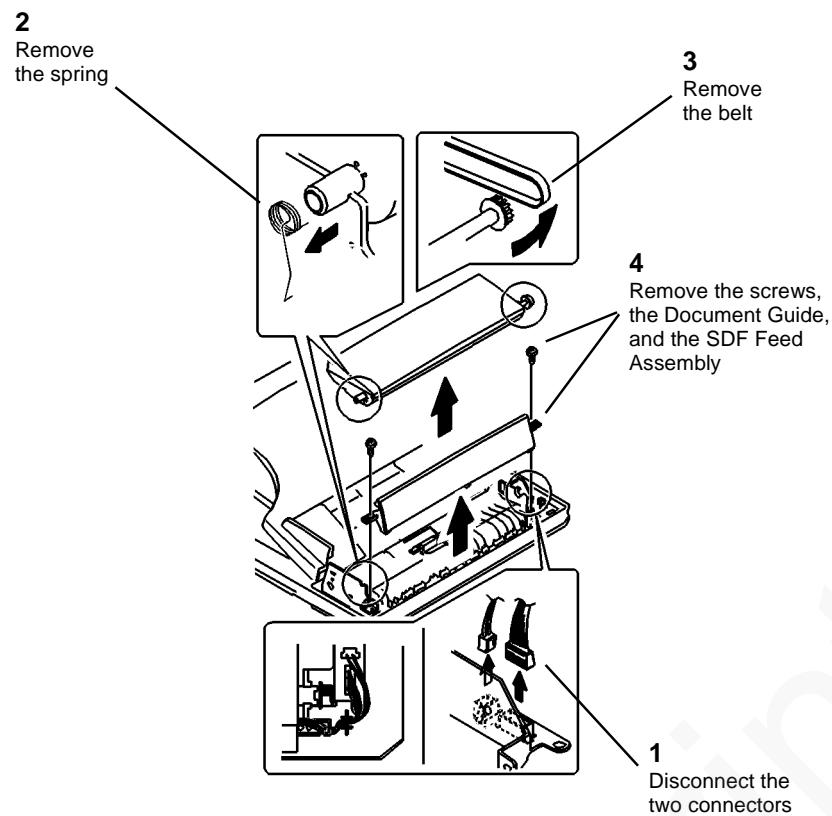
0500005A-SKY

Figure 4 Removing the Feed Solenoid

0500001A-SKY

Figure 1 Removing the Covers

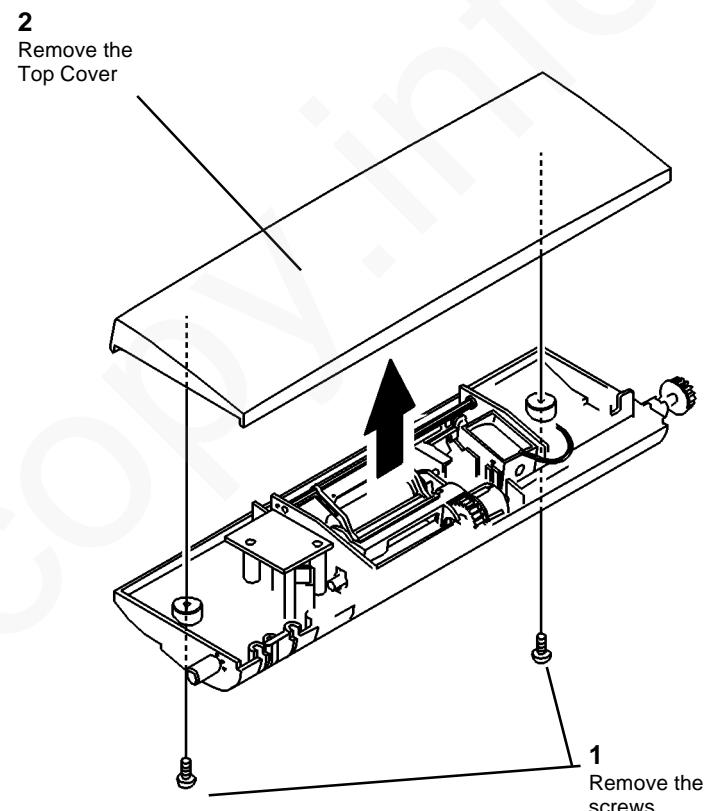
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Prepare to remove the clutch.

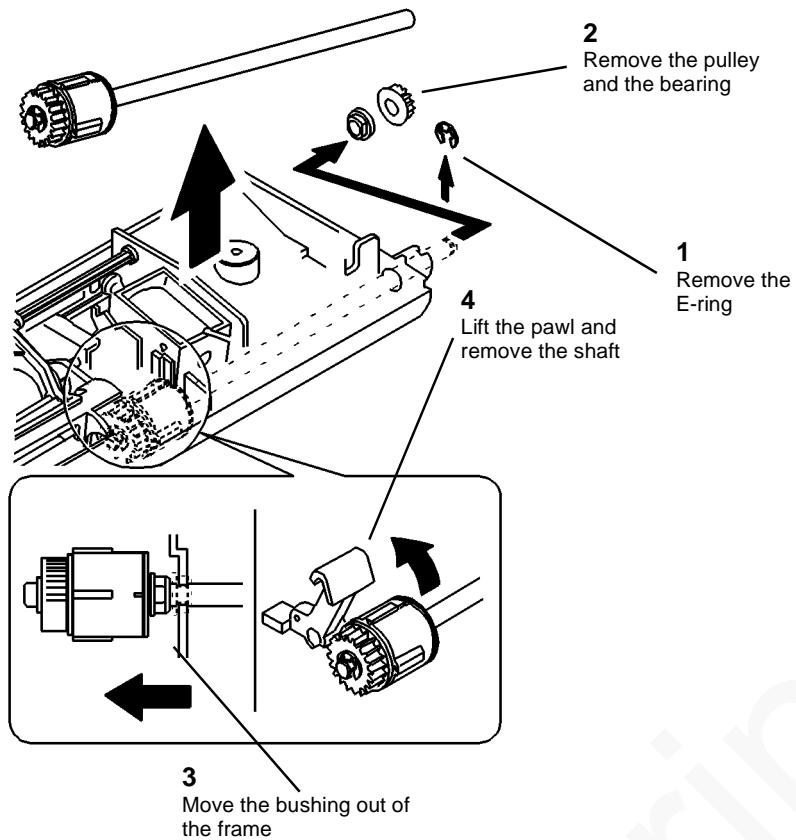
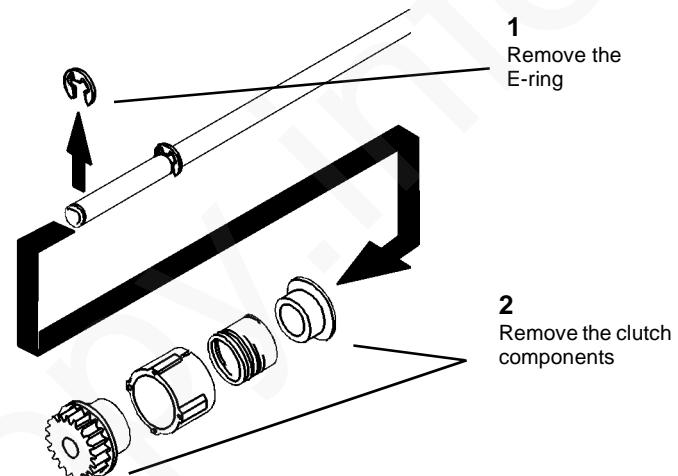


Figure 4 Preparing to Remove the Clutch

5. (Figure 5): Remove the clutch.



0500007A-SKY

Figure 5 Removing the Clutch

0500006A-SKY

REP 5.5 Feed Roller / Retard Roller

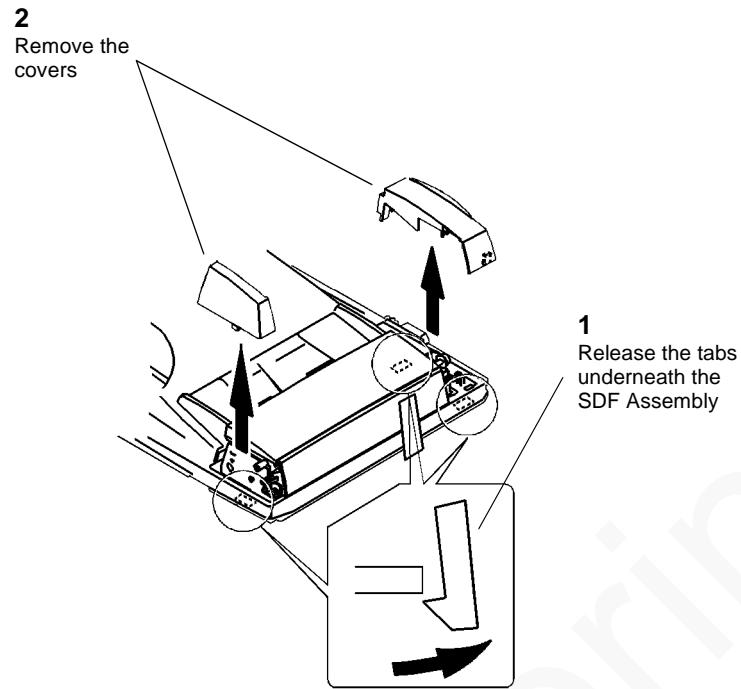
Parts List on PL 9.2

Removal

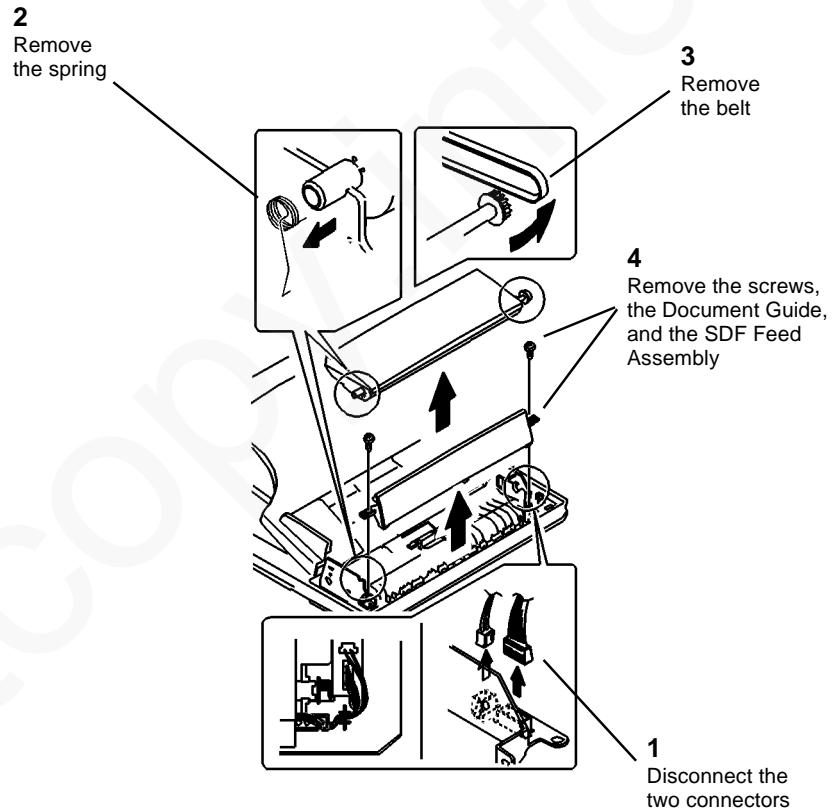
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



2. (Figure 2): Remove the SDF Feed Assembly.



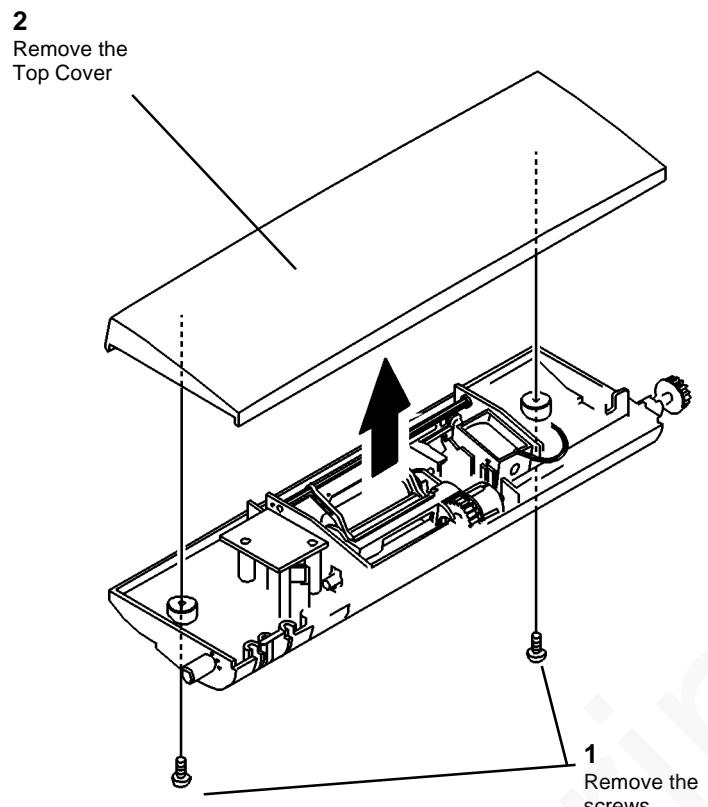
0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

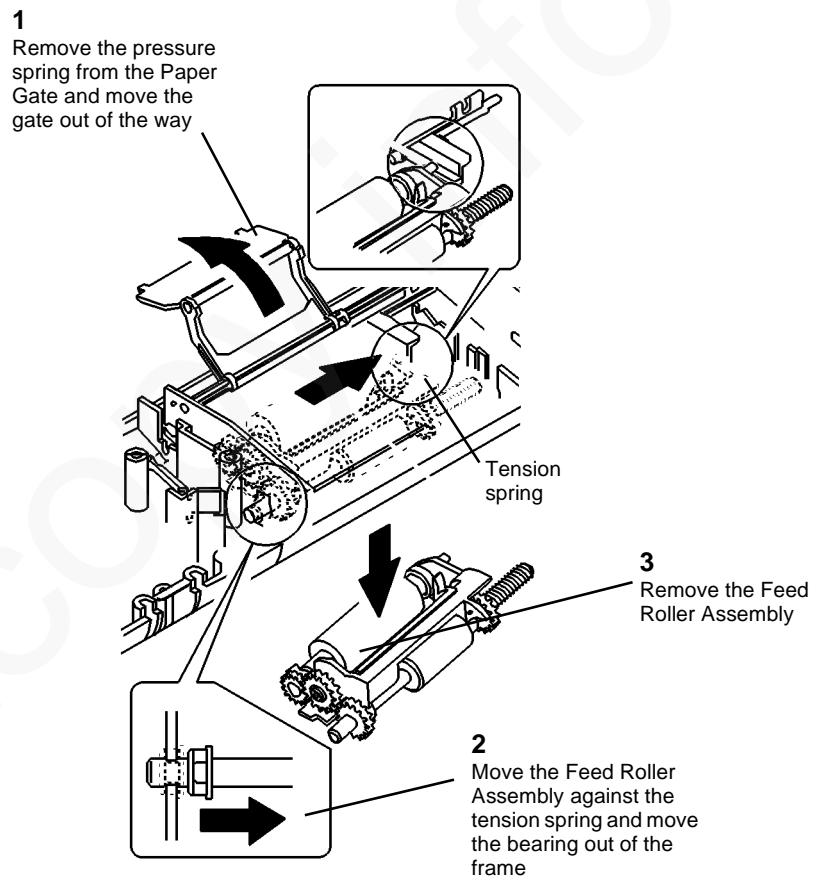
0500001A-SKY

Figure 1 Removing the Covers

3. (Figure 3): Remove the Top Cover.



4. (Figure 4): Remove the Feed Roller Assembly.



0500003A-SKY

Figure 3 Removing the Top Cover

0500008A-SKY

Figure 4 Removing the Feed Roller Assembly

5. (Figure 5): Remove the Retard Roller.

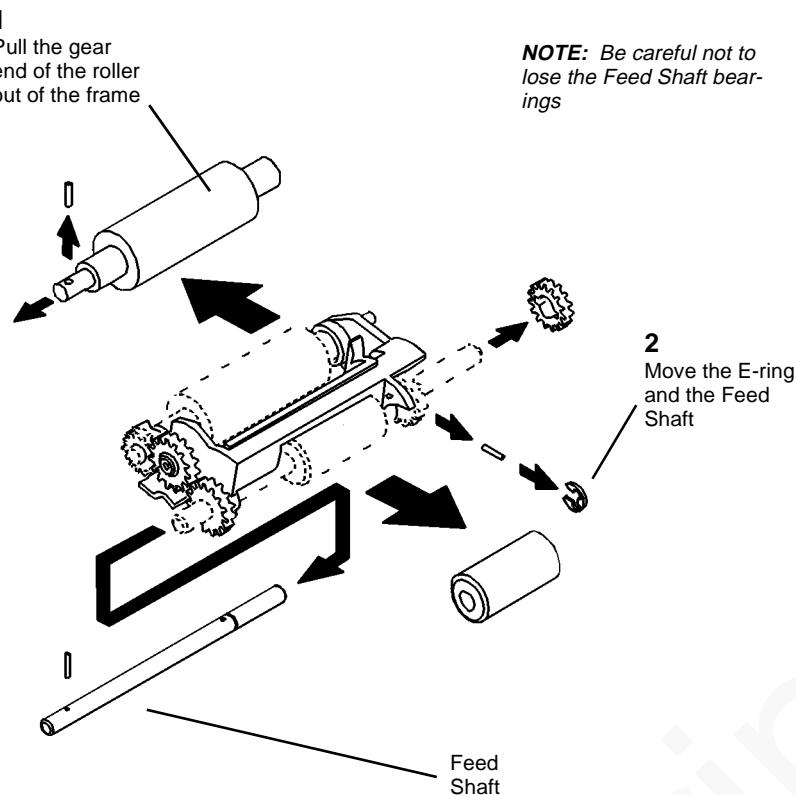


Figure 5 Removing the Retard Roller

0500009A-SKY

REP 5.6 Exit Drive Belt

Parts List on PL 9.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

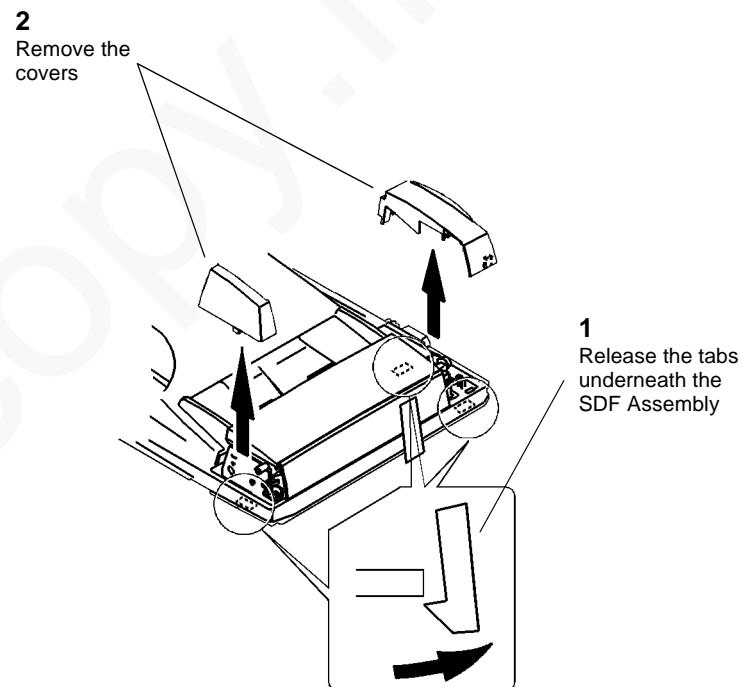
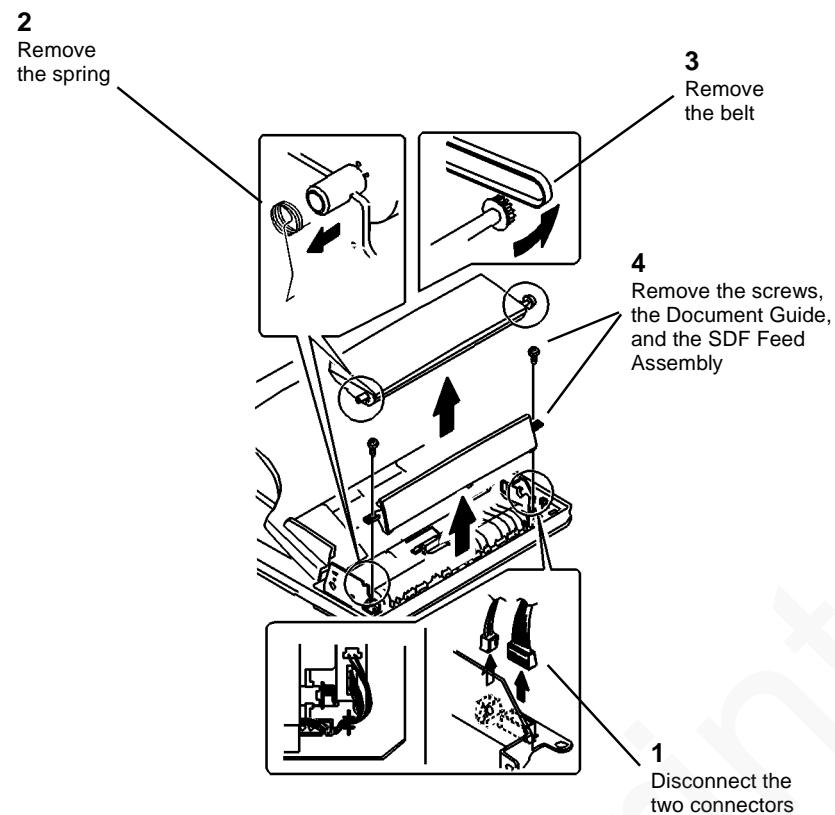


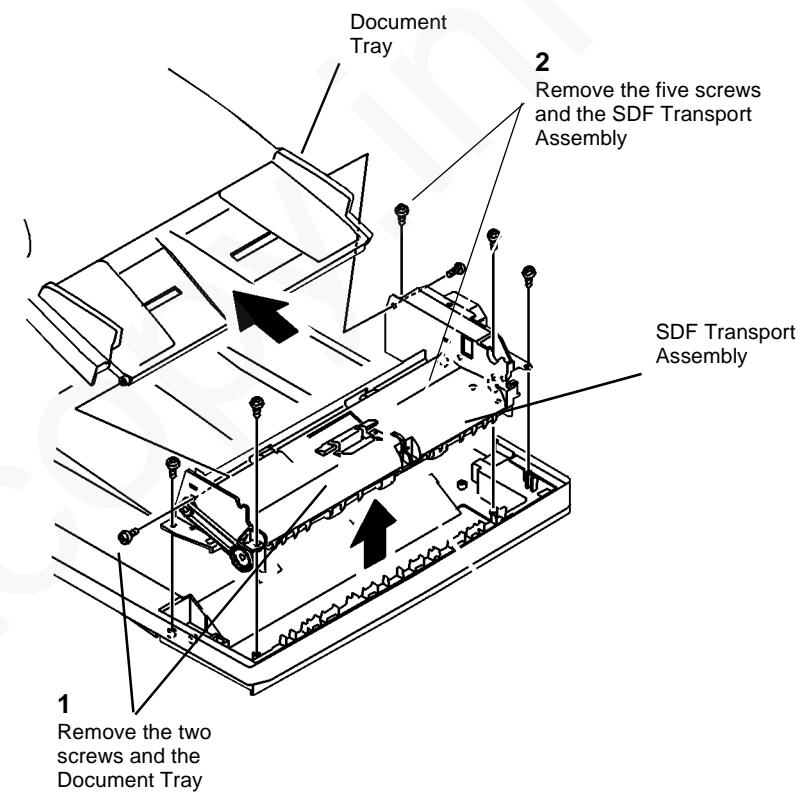
Figure 1 Removing the Covers

0500001A-SKY

2. (Figure 2): Remove the SDF Feed Assembly.



3. (Figure 3): Remove the Document Tray.



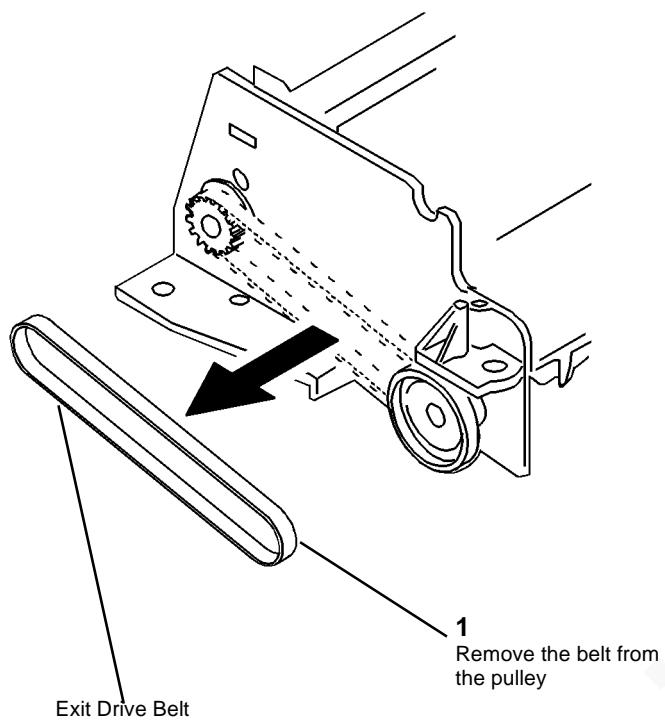
0500002A-SKY

0500010A-SKY

Figure 2 Removing the SDF Feed Assembly

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.



0500011A-SKY

Figure 4 Removing the Exit Drive Belt

REP 5.7 SDF Drive Motor (MOT1)

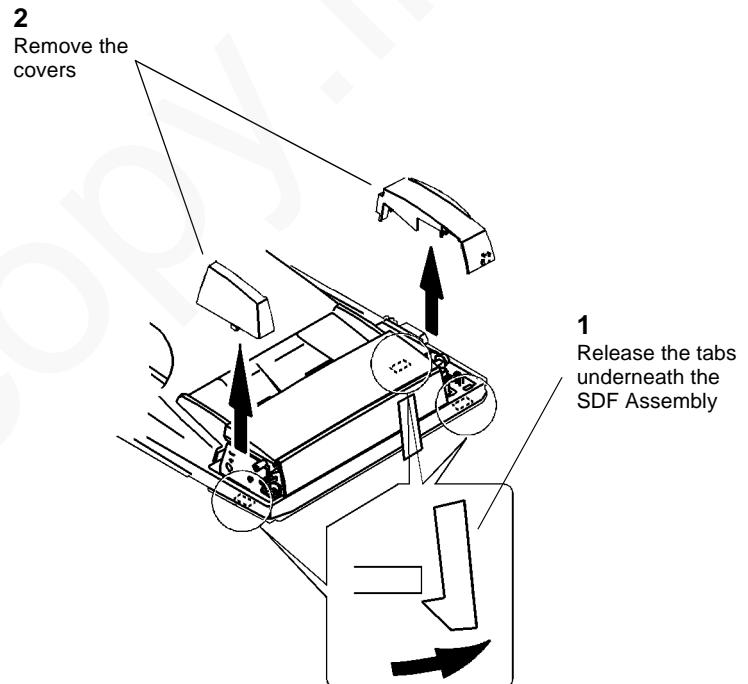
Parts List on PL 9.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

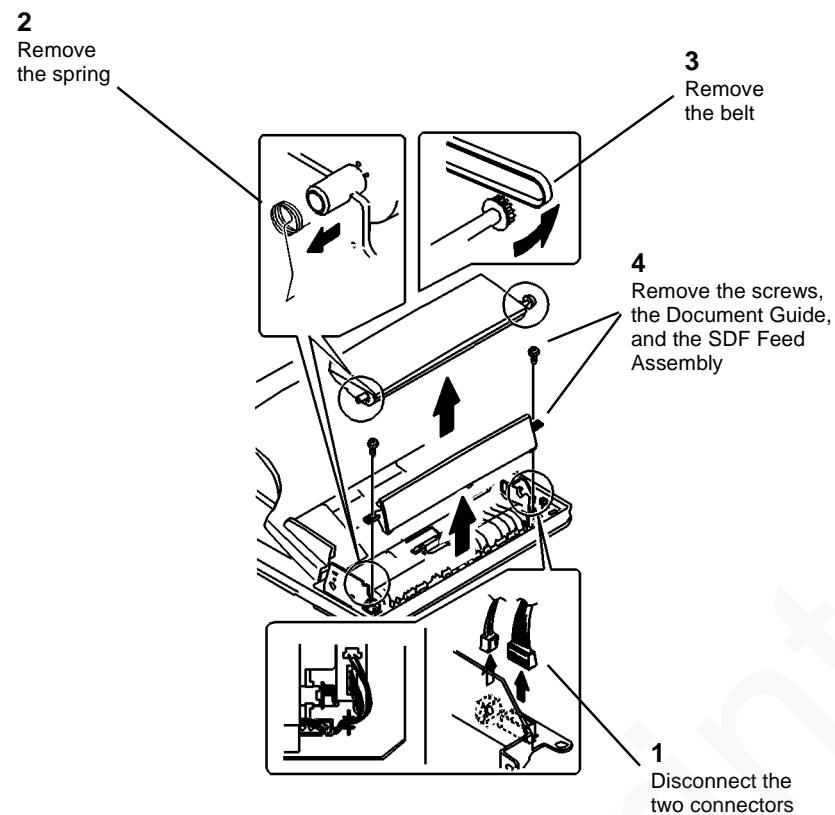
1. (Figure 1): Remove the Front Cover and the Rear Cover.



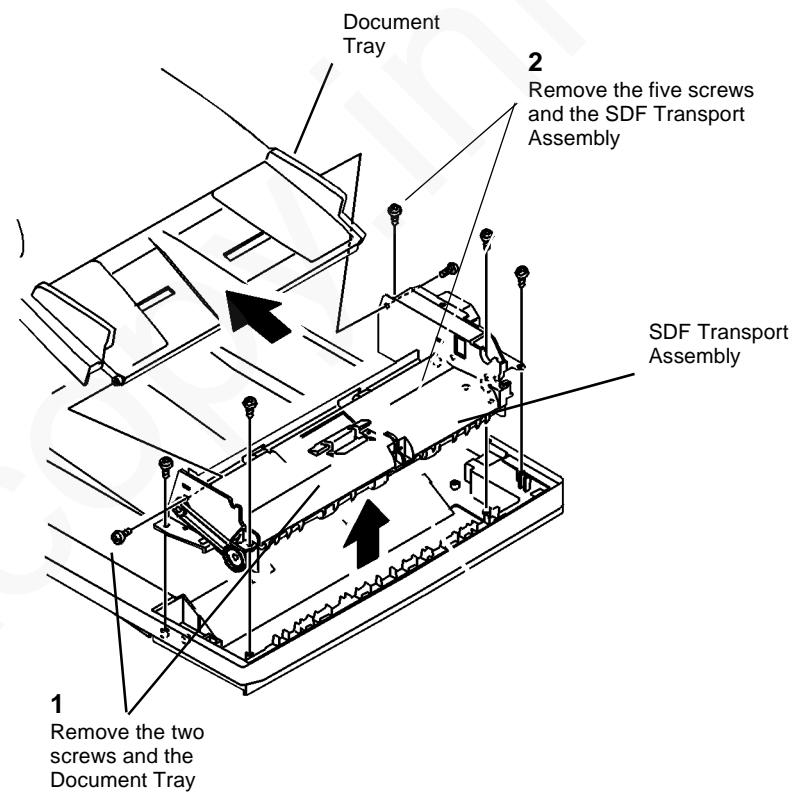
0500001A-SKY

Figure 1 Removing the Covers

2. (Figure 2): Remove the SDF Feed Assembly.



3. (Figure 3): Remove the Document Tray.



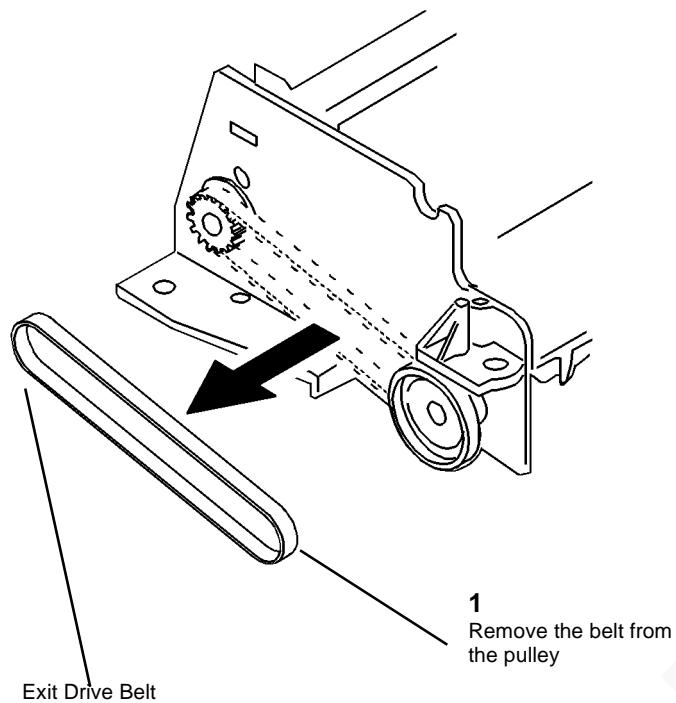
0500002A-SKY

0500010A-SKY

Figure 2 Removing the SDF Feed Assembly

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.



5. (Figure 5): Remove the SDF Drive Motor.

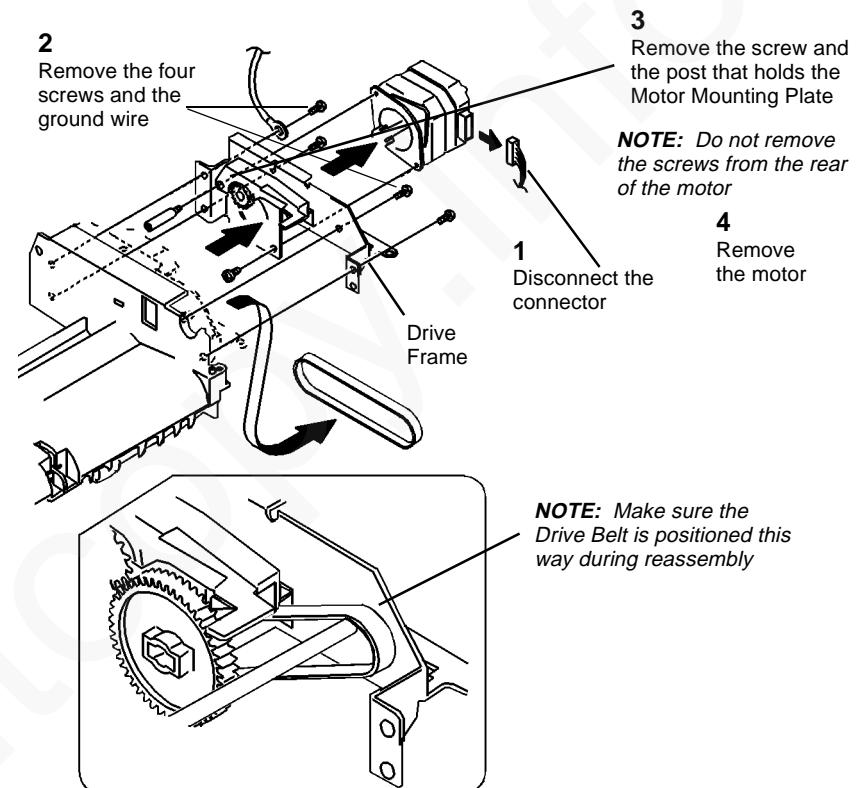


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

Figure 5 Removing the SDF Drive Motor

0500012A-SKY

REP 5.8 Document Path Sensor (Q3)

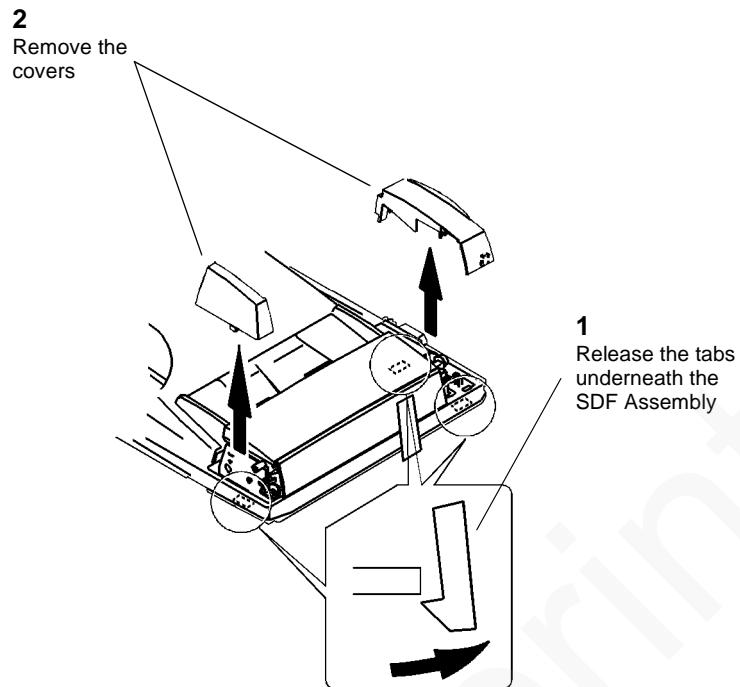
Parts List on PL 9.3

Removal

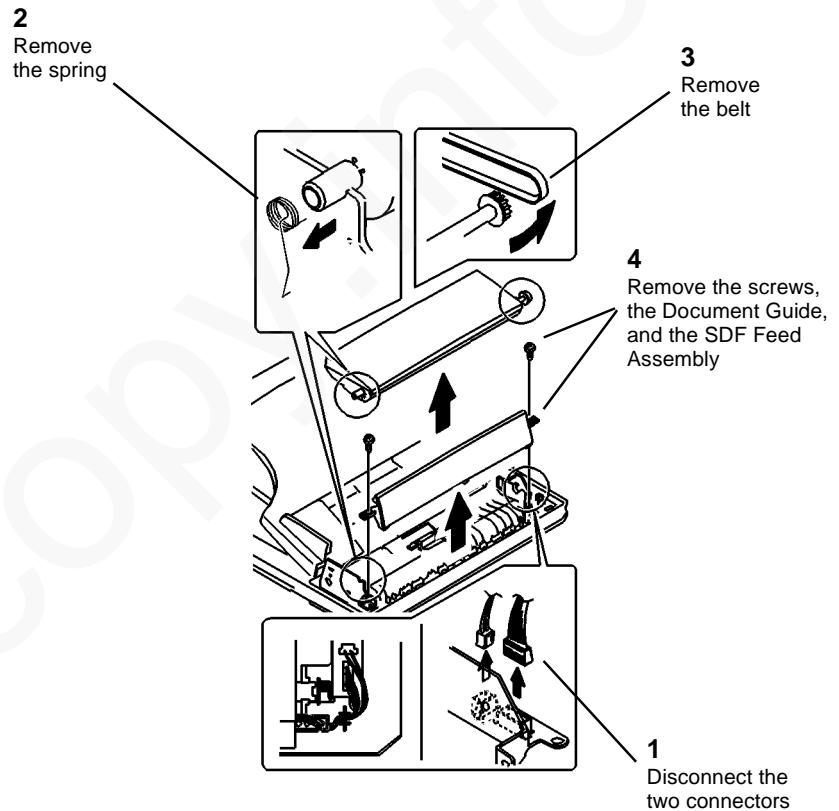
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



2. (Figure 2): Remove the SDF Feed Assembly.



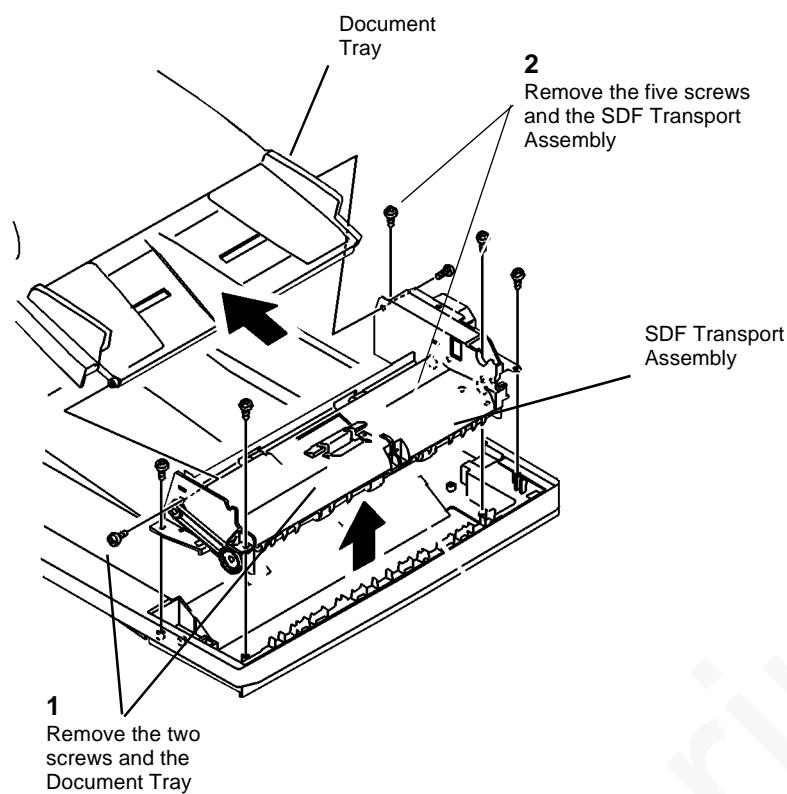
0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

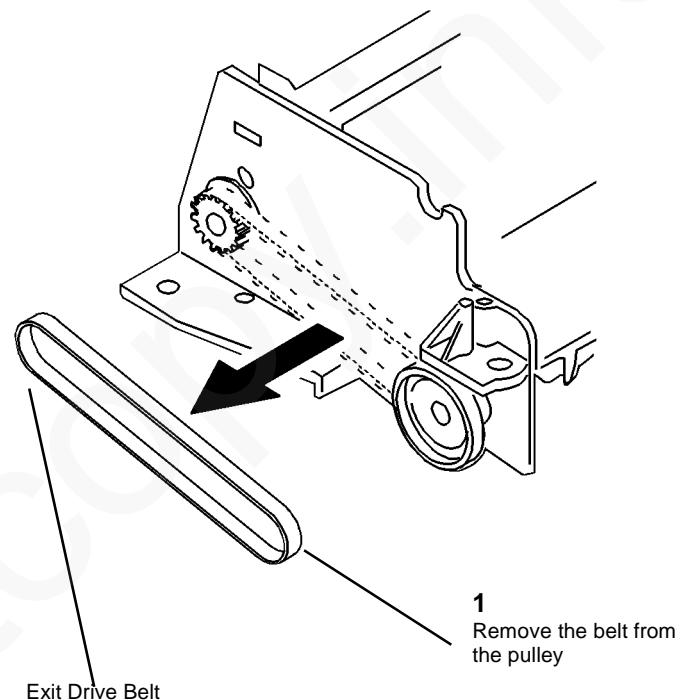
0500001A-SKY

Figure 1 Removing the Covers

3. (Figure 3): Remove the Document Tray.



4. (Figure 4): Remove the Exit Drive Belt.



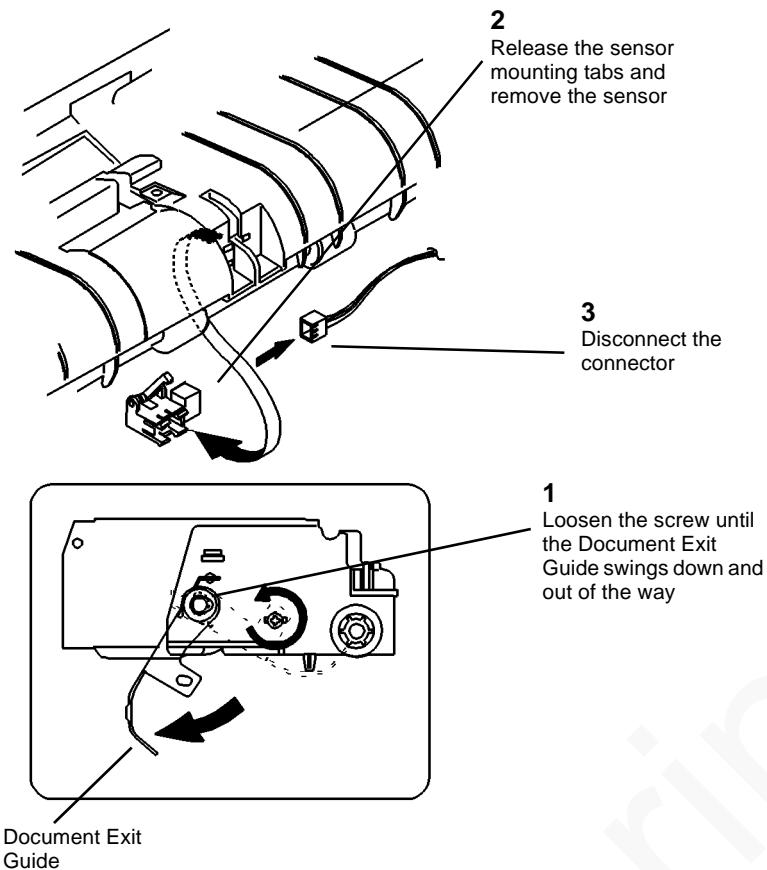
0500010A-SKY

0500011A-SKY

Figure 3 Removing the Document Tray

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Document Path Sensor.



0500013A-SKY

Figure 5 Removing the Document Path Sensor

REP 5.9 Transport Roller

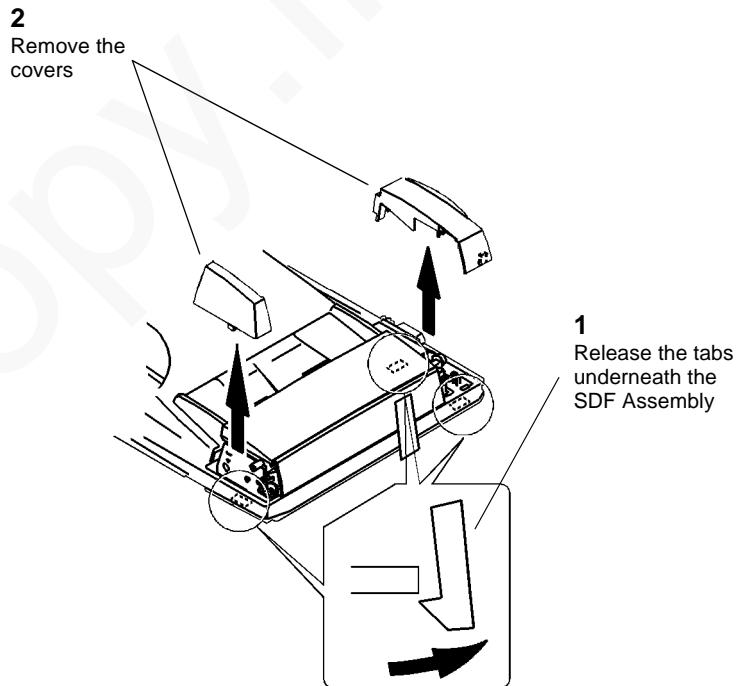
Parts List on PL 9.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

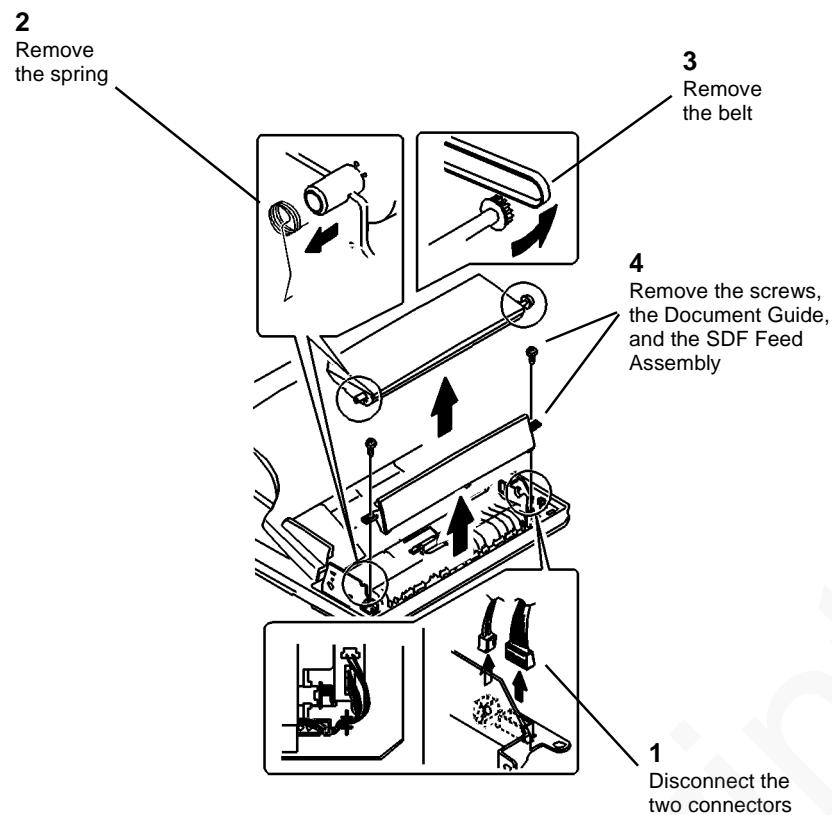
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

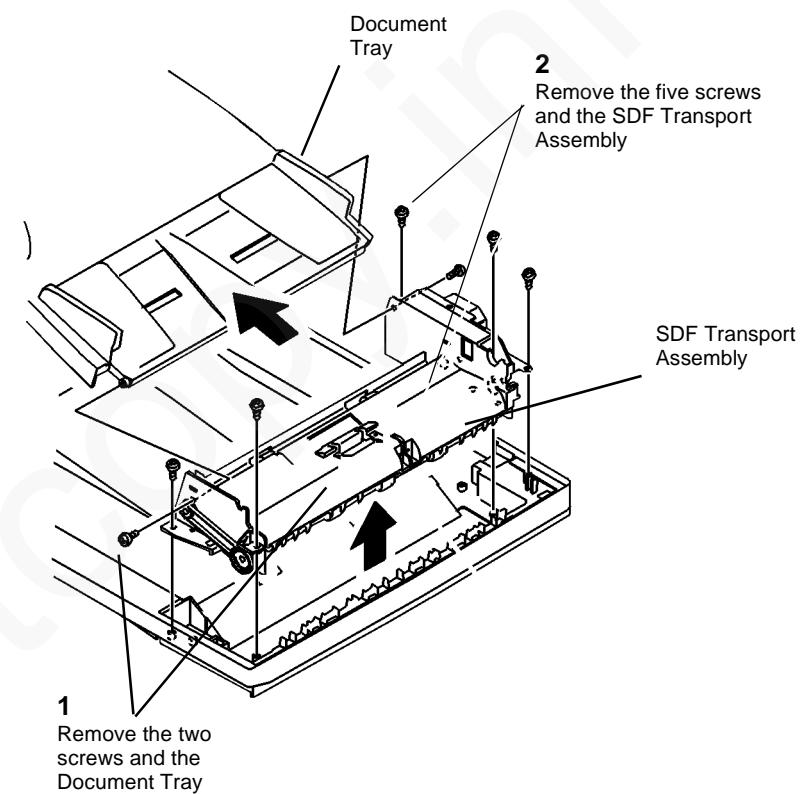
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

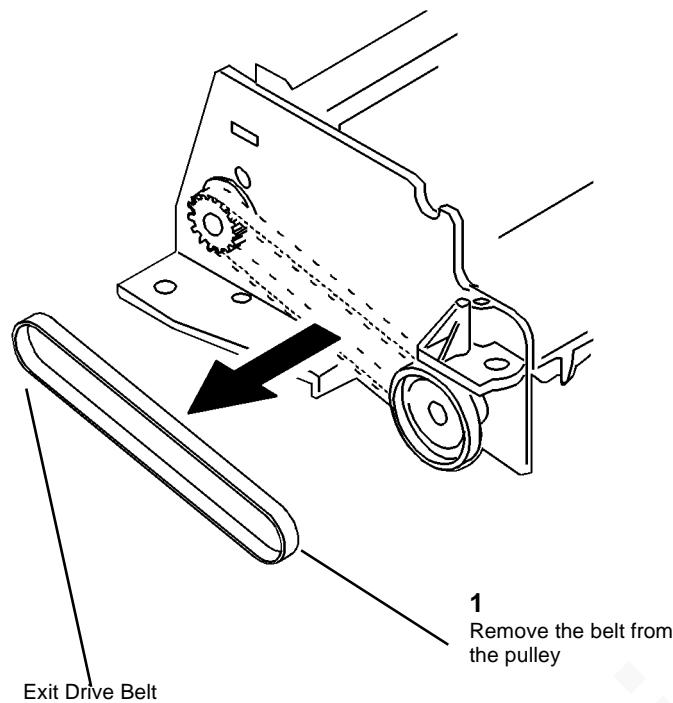
3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

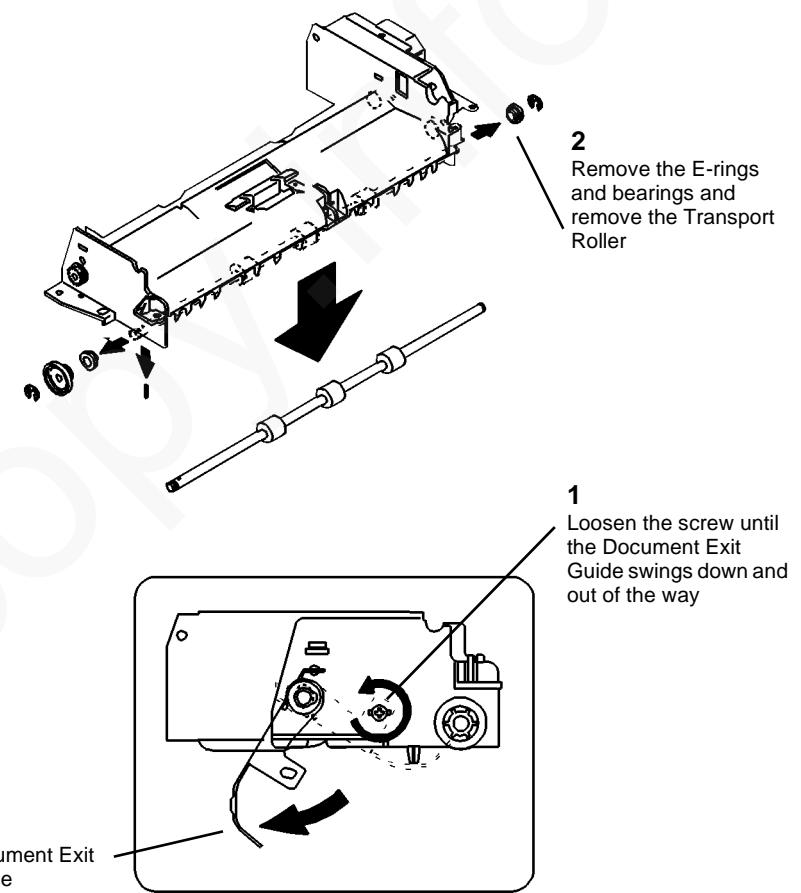
4. (Figure 4): Remove the Exit Drive Belt.



0500011A-SKY

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Transport Roller.



0500014A-SKY

Figure 5 Removing the Transport Roller

REP 5.10 Exit Roller

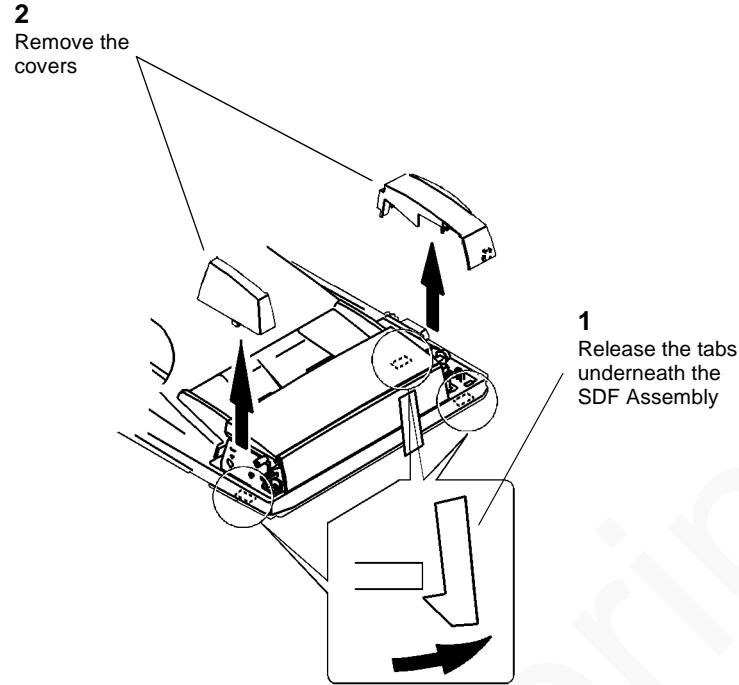
Parts List on PL 9.1

Removal

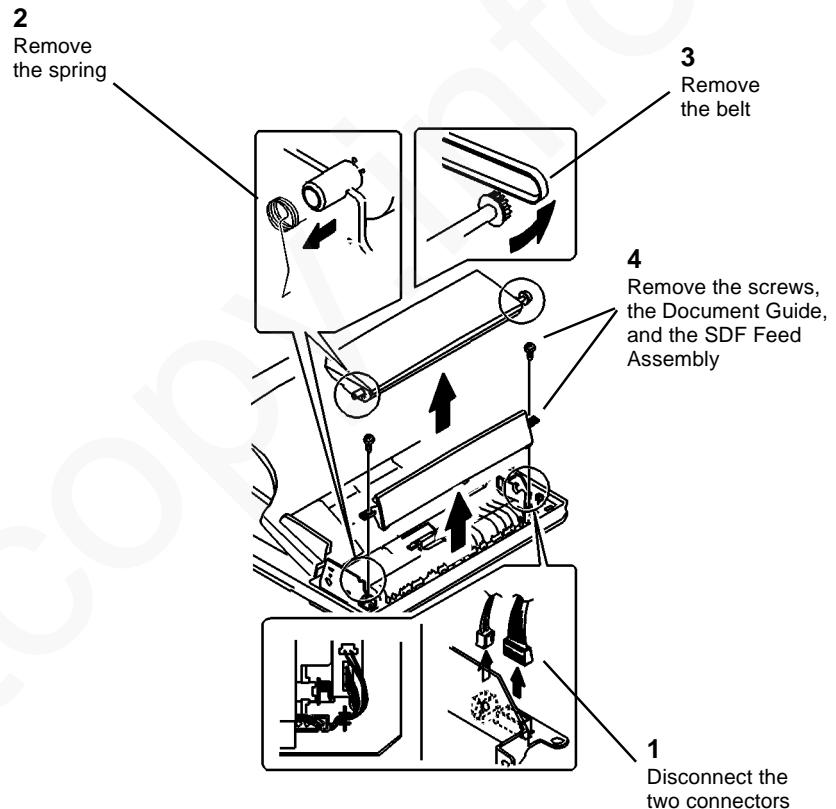
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



2. (Figure 2): Remove the SDF Feed Assembly.



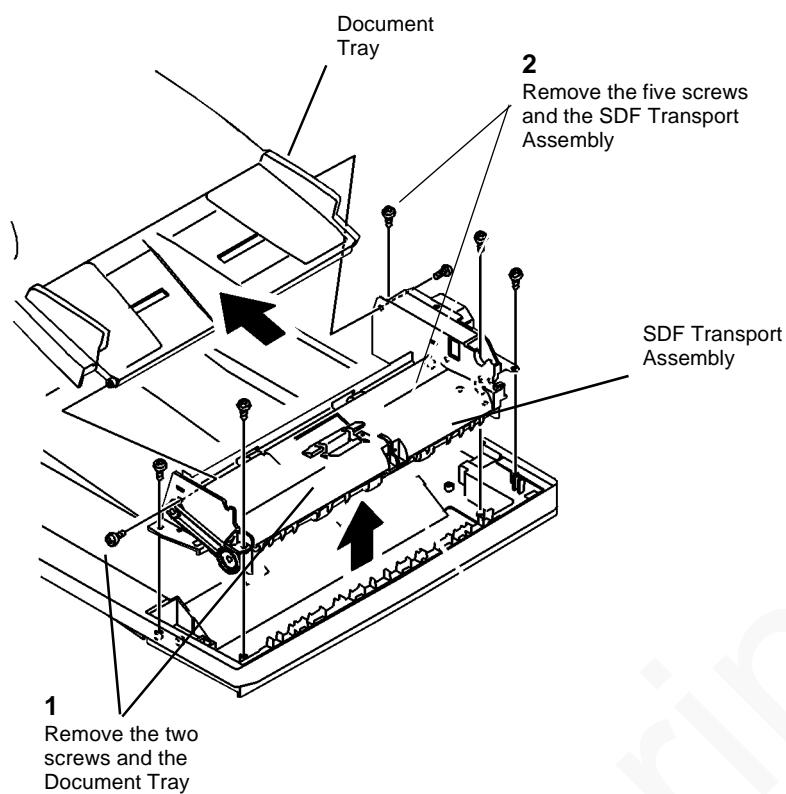
0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

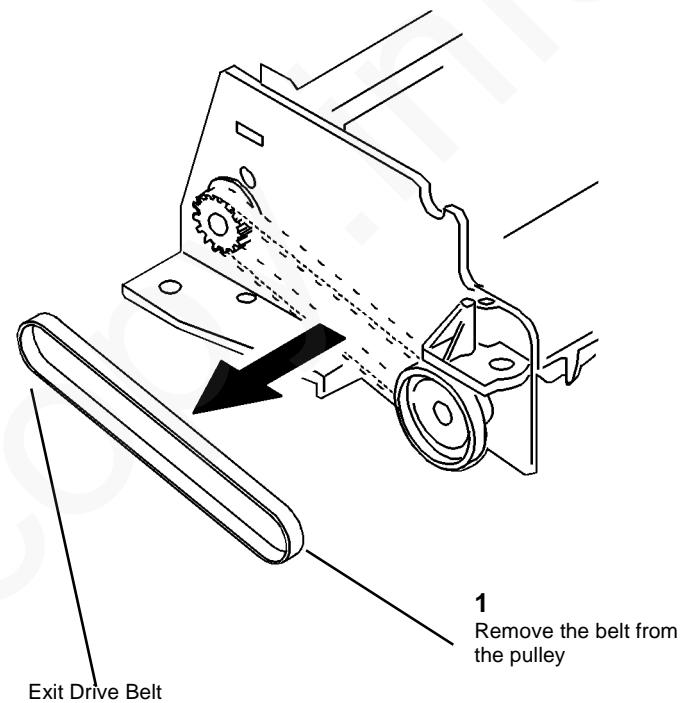
0500001A-SKY

Figure 1 Removing the Covers

3. (Figure 3): Remove the Document Tray.



4. (Figure 4): Remove the Exit Drive Belt.



0500010A-SKY

0500011A-SKY

Figure 3 Removing the Document Tray

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Exit Roller.

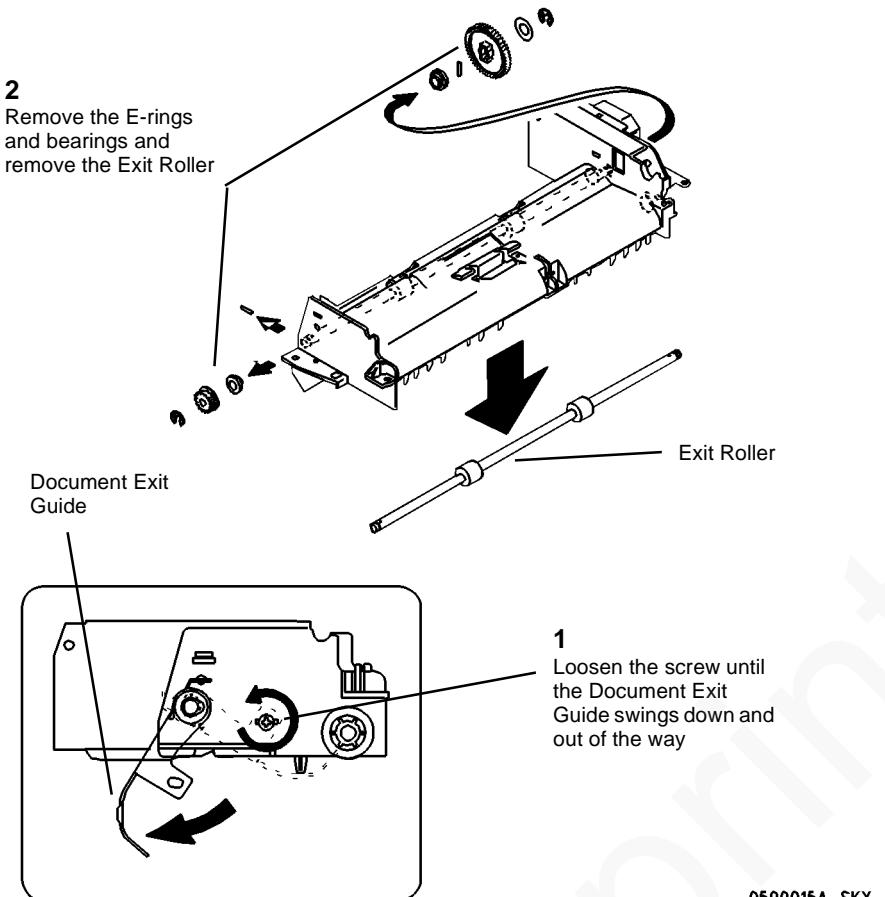


Figure 5 Removing the Exit Roller

REP 5.15 DSDF Assembly

Parts List on PL 9.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Rear Cover.
2. Remove the six screws and the PWB Cover (PL 7.1).

NOTE: Cut cable ties or release cable clamps as necessary.

3. Disconnect the ground wire and cable coming from the SDF Assembly.
4. Lift the SDF Assembly up slowly off the Document Glass. While tilting the hinges in the rear direction, lift the hinges out of the hinge guides.

REP 5.16 DSDF Sensor PWB

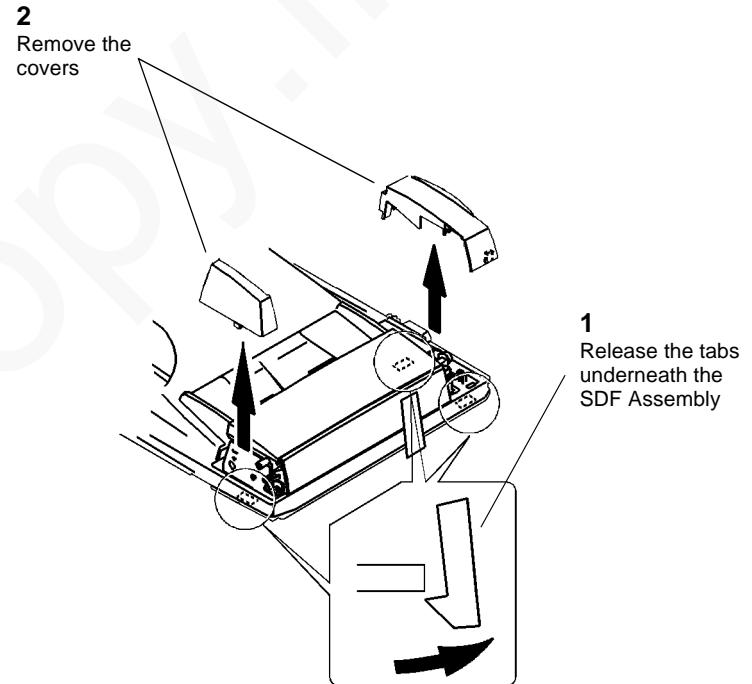
Parts List on PL 9.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

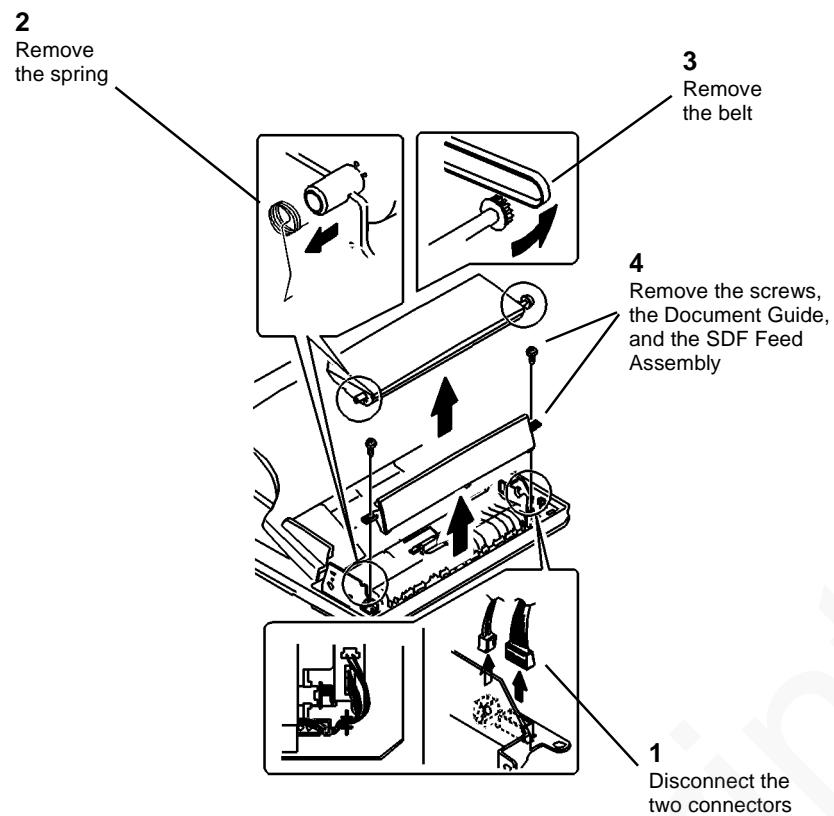
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

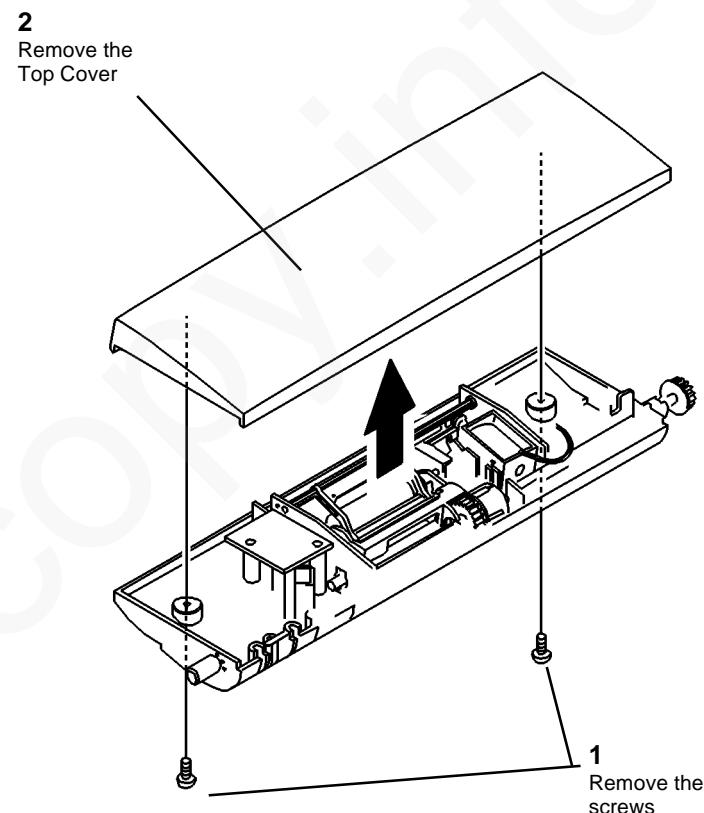
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

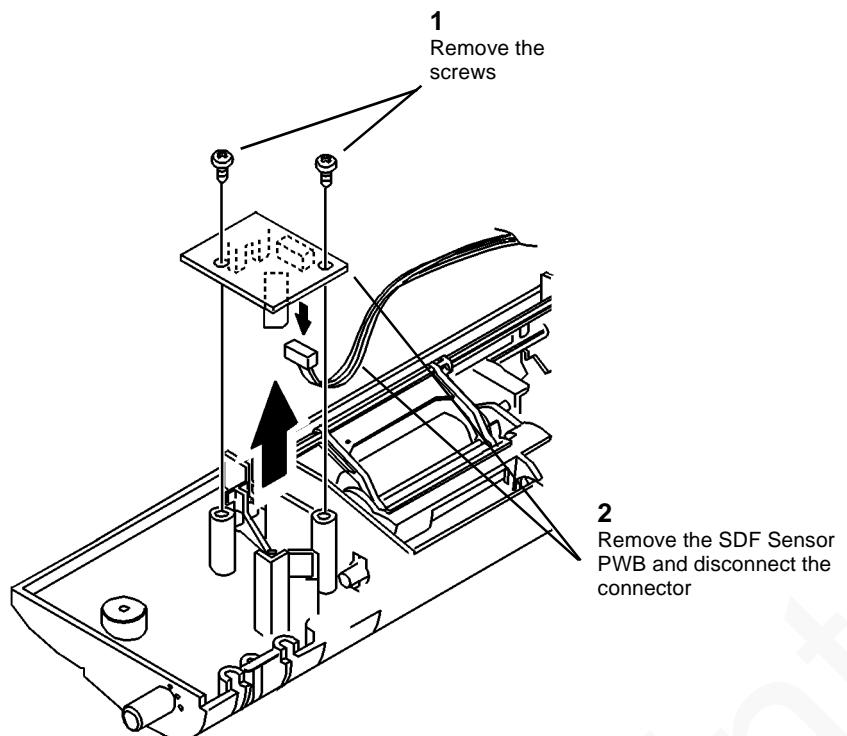
3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the SDF Sensor PWB.



0500004A-SKY

Figure 4 Removing the SDF Sensor PWB

REP 5.17 DSDF Feed Solenoid (SOL1)

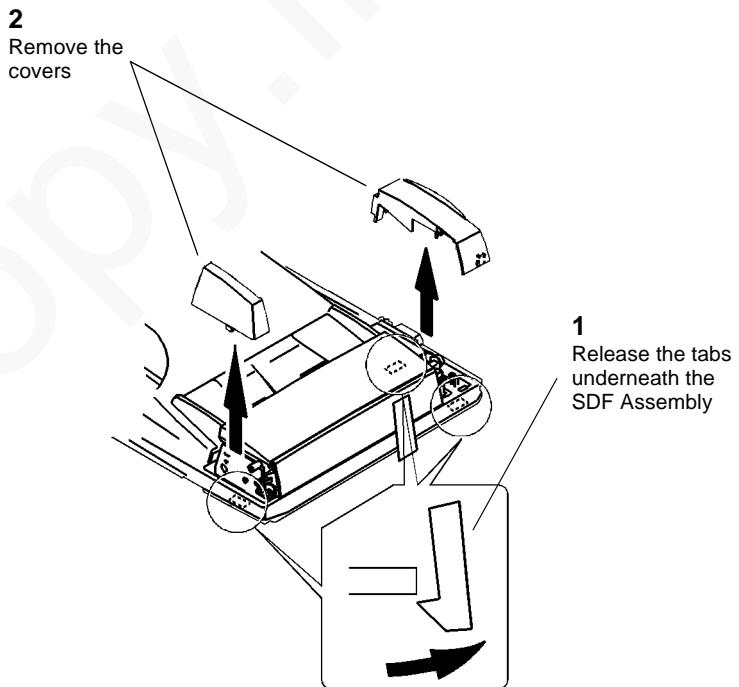
Parts List on PL 9.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

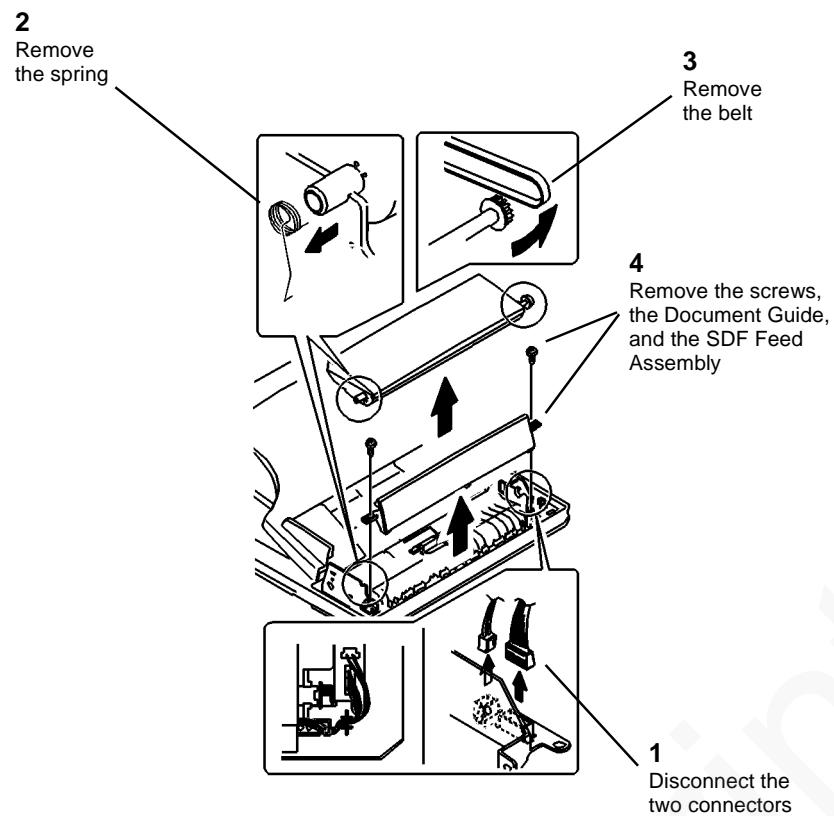
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

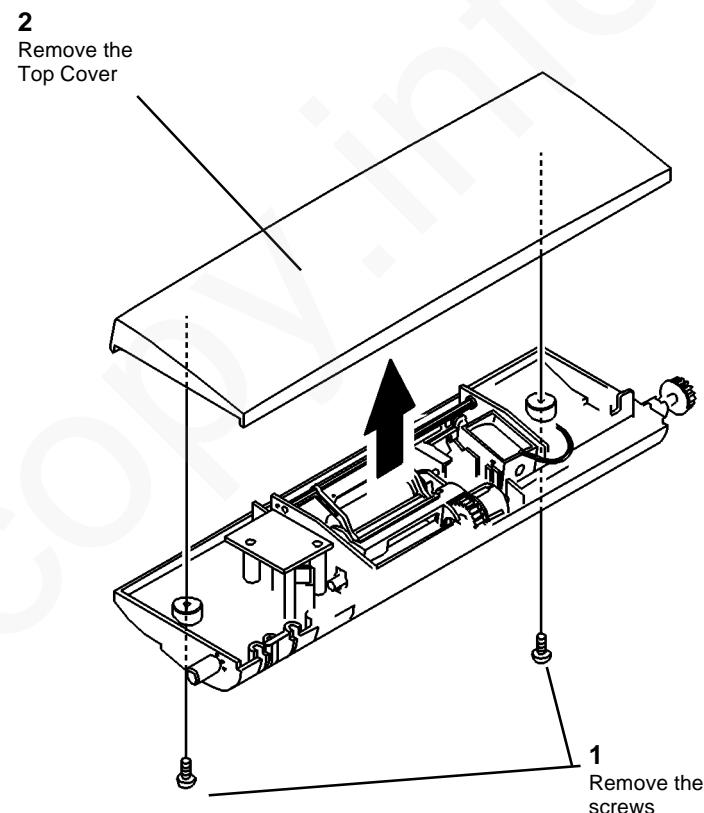
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

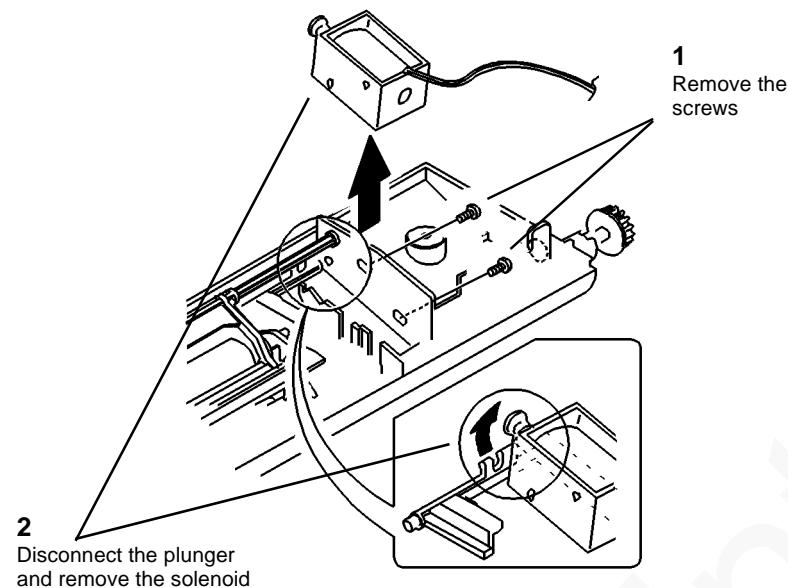
3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Remove the Feed Solenoid.



REP 5.18 DSDF Feed Clutch

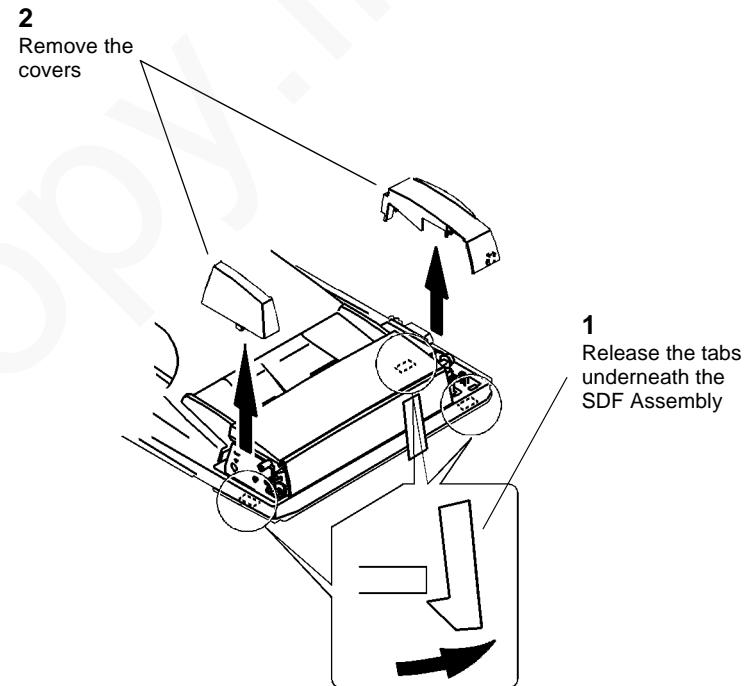
Parts List on PL 9.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



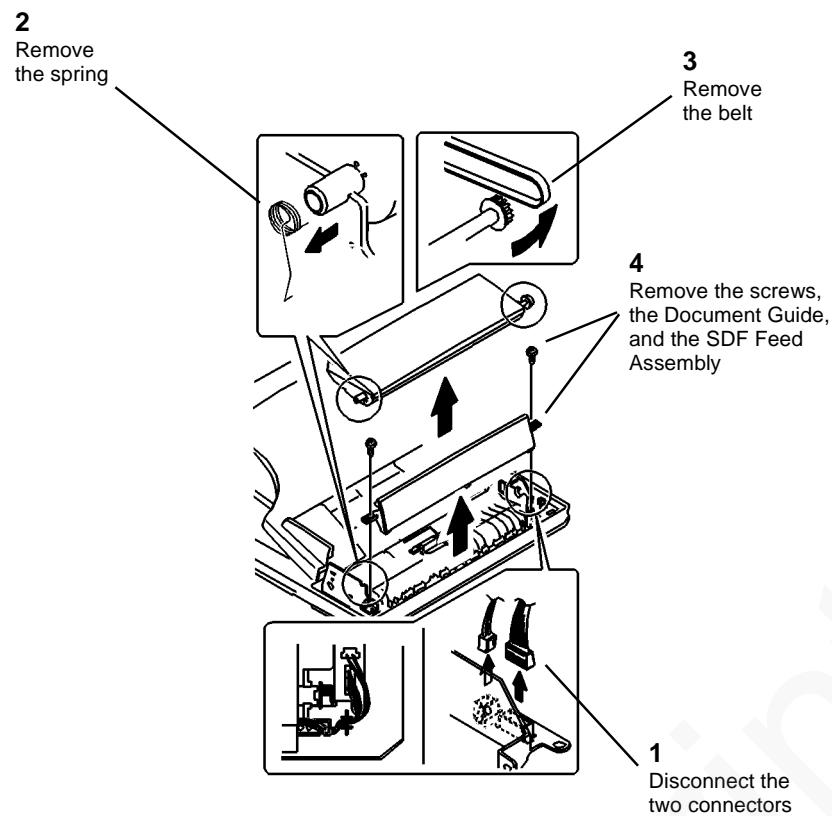
0500005A-SKY

Figure 4 Removing the Feed Solenoid

0500001A-SKY

Figure 1 Removing the Covers

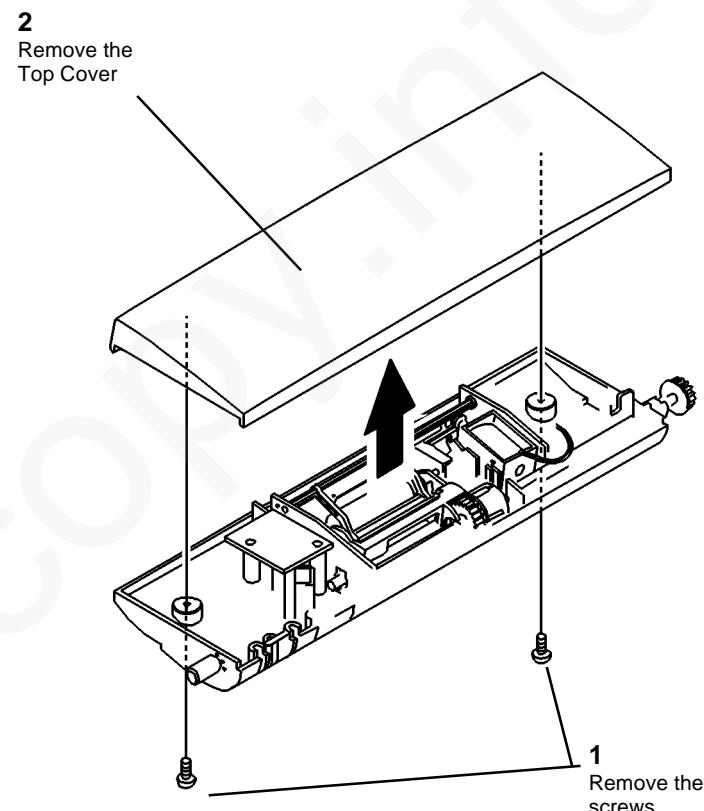
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Top Cover.



0500003A-SKY

Figure 3 Removing the Top Cover

4. (Figure 4): Prepare to remove the clutch.

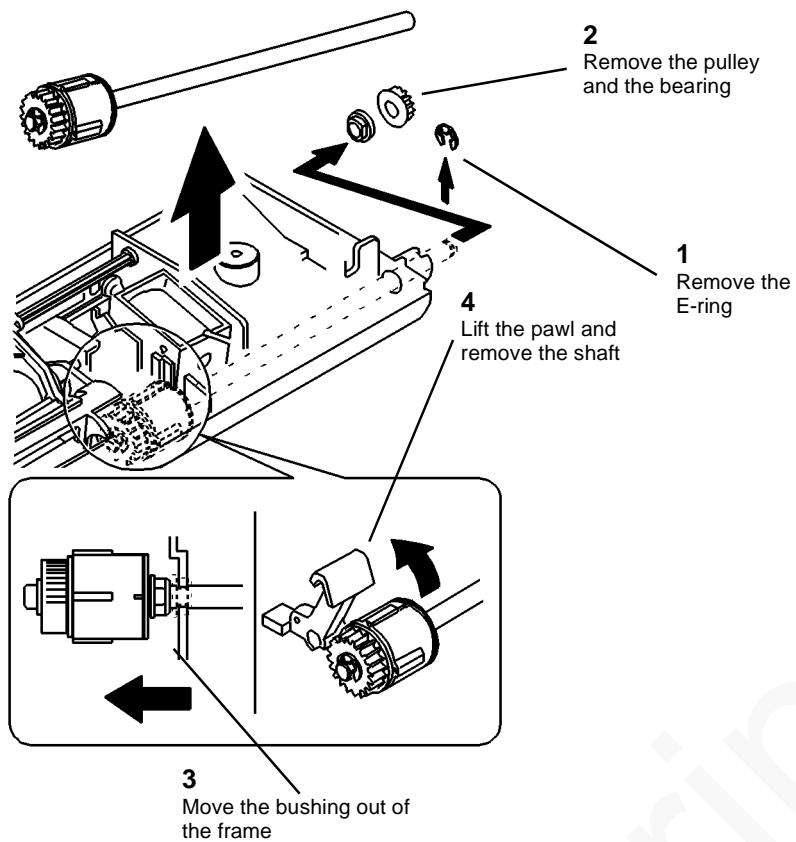
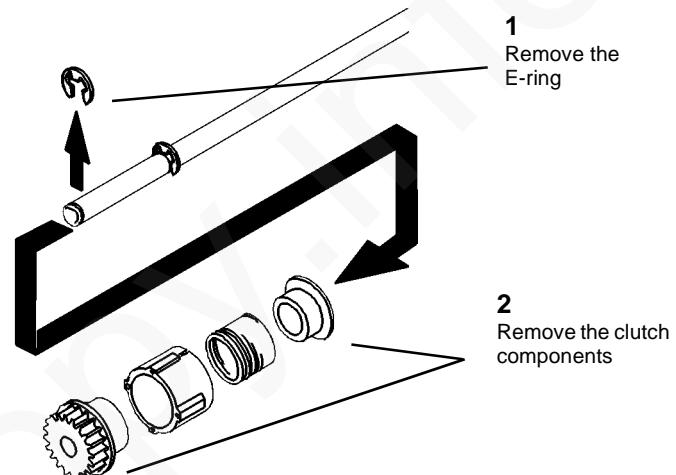


Figure 4 Preparing to Remove the Clutch

5. (Figure 5): Remove the clutch.



0500007A-SKY

Figure 5 Removing the Clutch

0500006A-SKY

REP 5.19 DSDF Feed Roller / Retard Roller

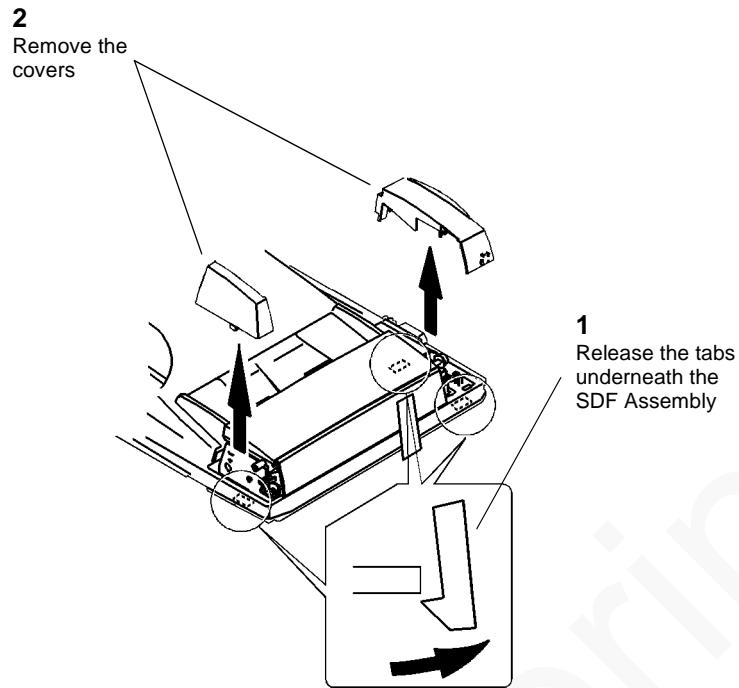
Parts List on PL 9.2

Removal

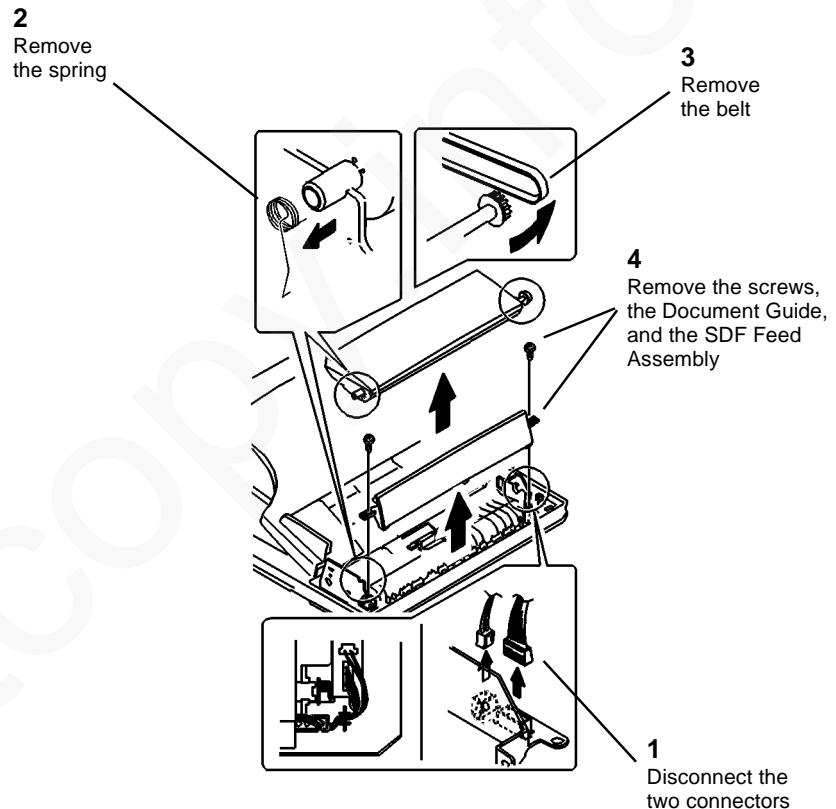
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



2. (Figure 2): Remove the SDF Feed Assembly.



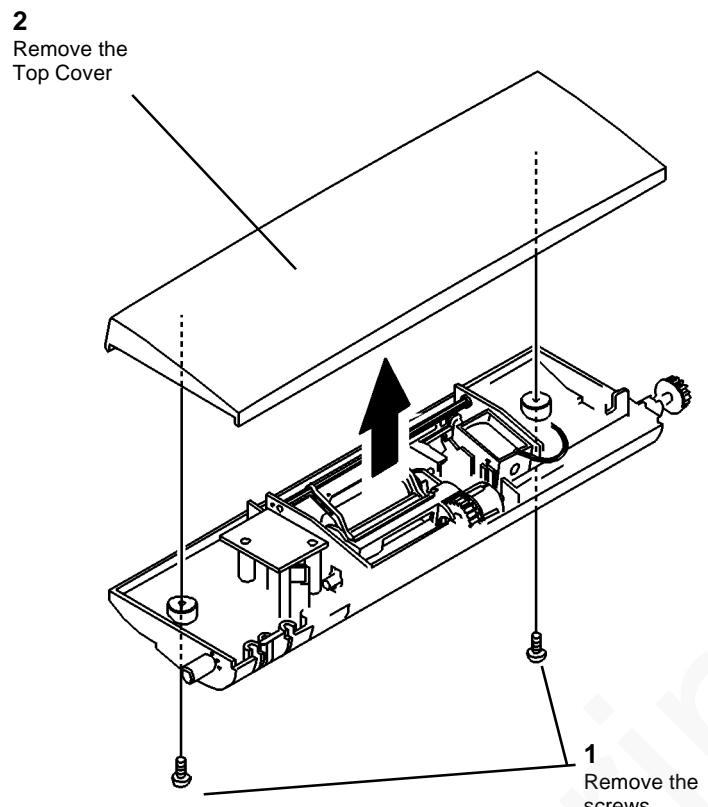
0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

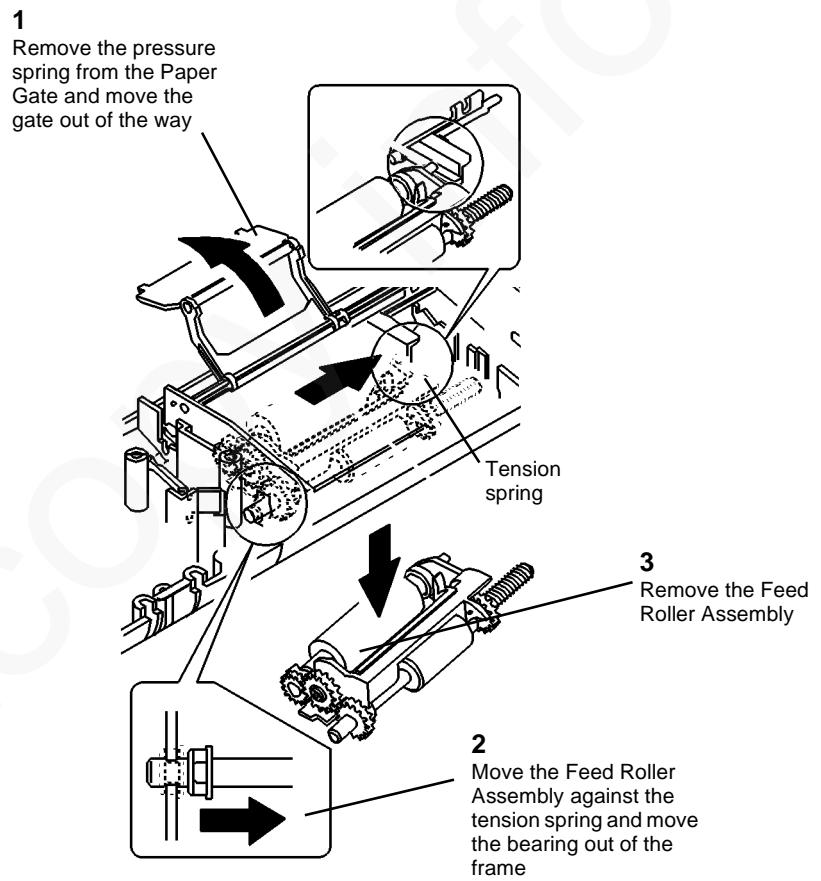
0500001A-SKY

Figure 1 Removing the Covers

3. (Figure 3): Remove the Top Cover.



4. (Figure 4): Remove the Feed Roller Assembly.



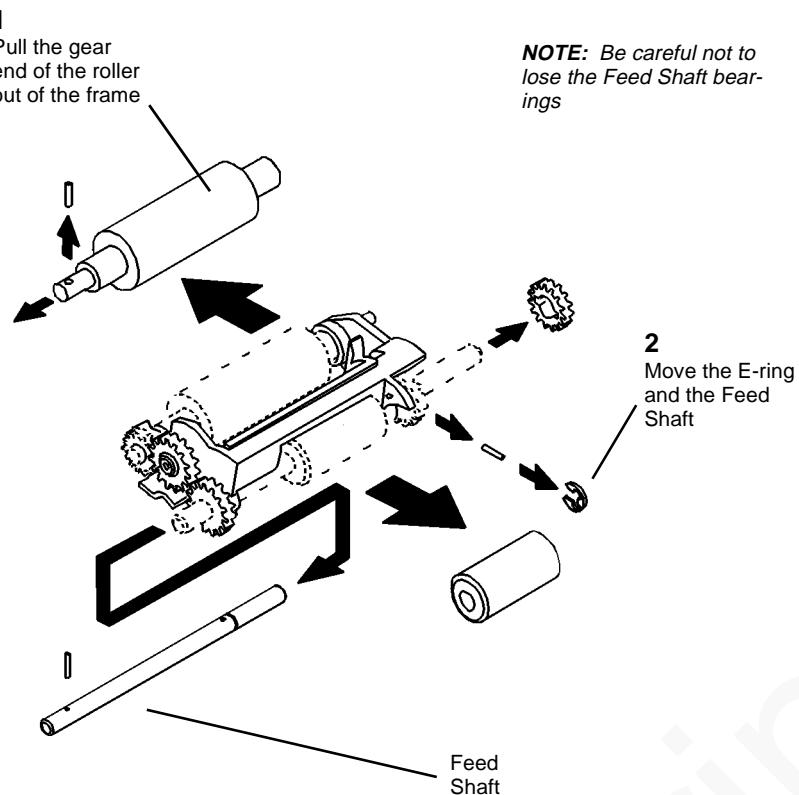
0500003A-SKY

Figure 3 Removing the Top Cover

0500008A-SKY

Figure 4 Removing the Feed Roller Assembly

5. (Figure 5): Remove the Retard Roller.



0500009A-SKY

Figure 5 Removing the Retard Roller

REP 5.20 DSDF Drive Motor (MOT1)

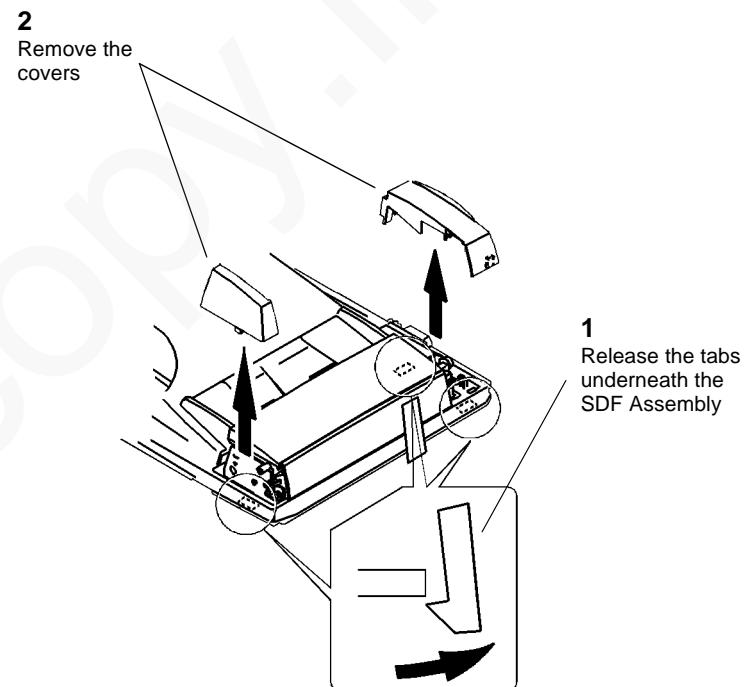
Parts List on PL 9.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

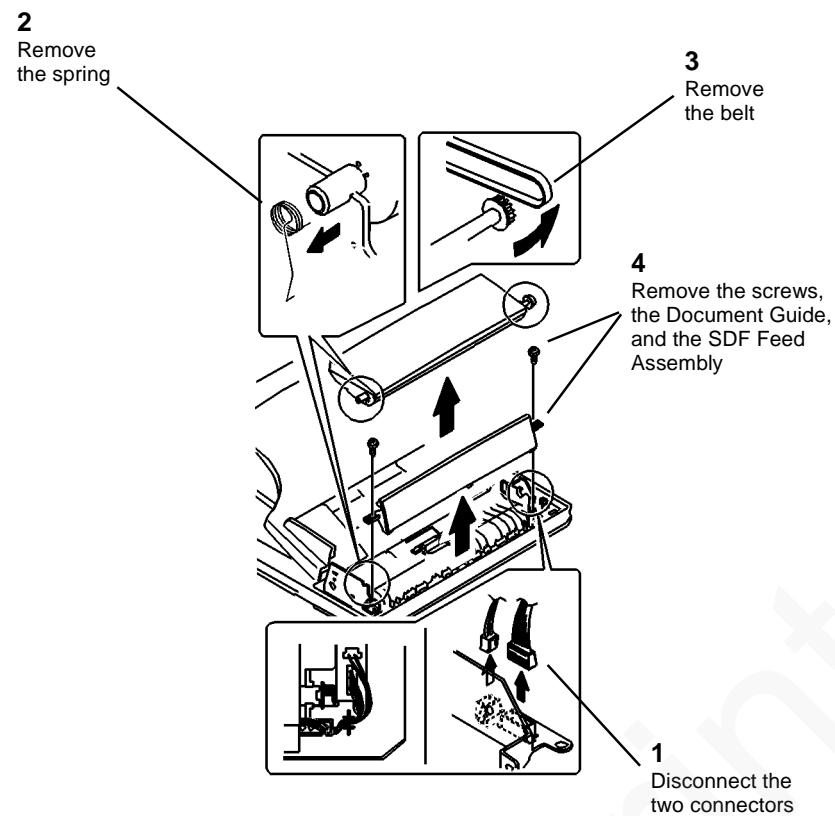
1. (Figure 1): Remove the Front Cover and the Rear Cover.



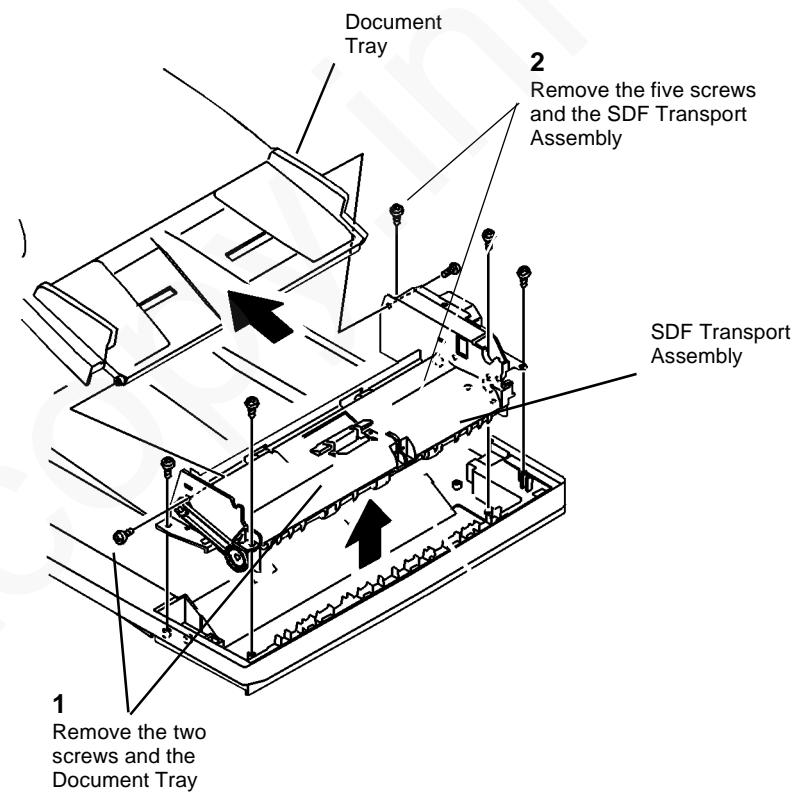
0500001A-SKY

Figure 1 Removing the Covers

2. (Figure 2): Remove the SDF Feed Assembly.



3. (Figure 3): Remove the Document Tray.



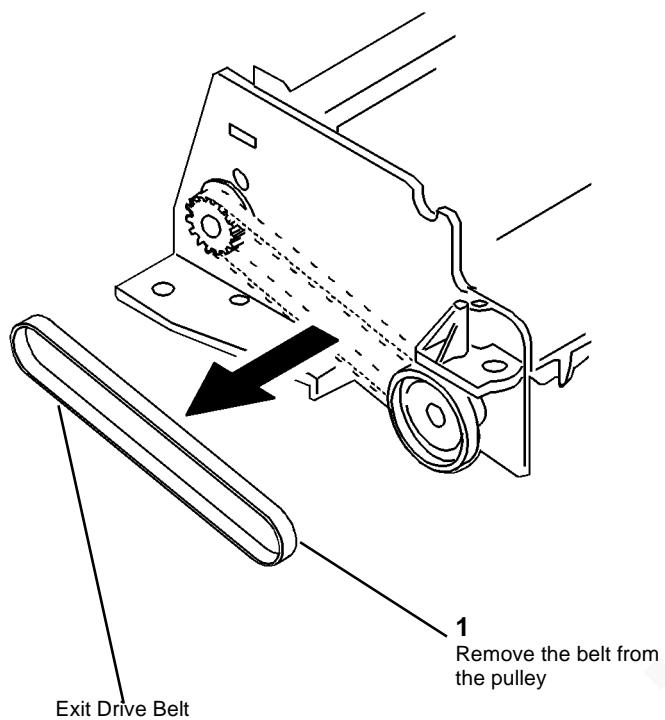
0500002A-SKY

0500010A-SKY

Figure 2 Removing the SDF Feed Assembly

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.



0500011A-SKY

Figure 4 Removing the Exit Drive Belt

REP 5.21 DSDF Document Sensor (Q3)

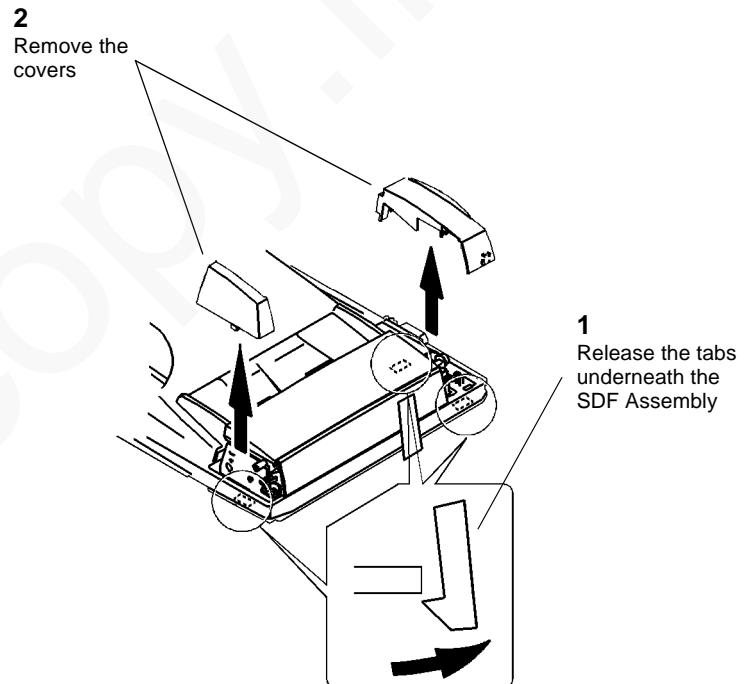
Parts List on PL 9.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

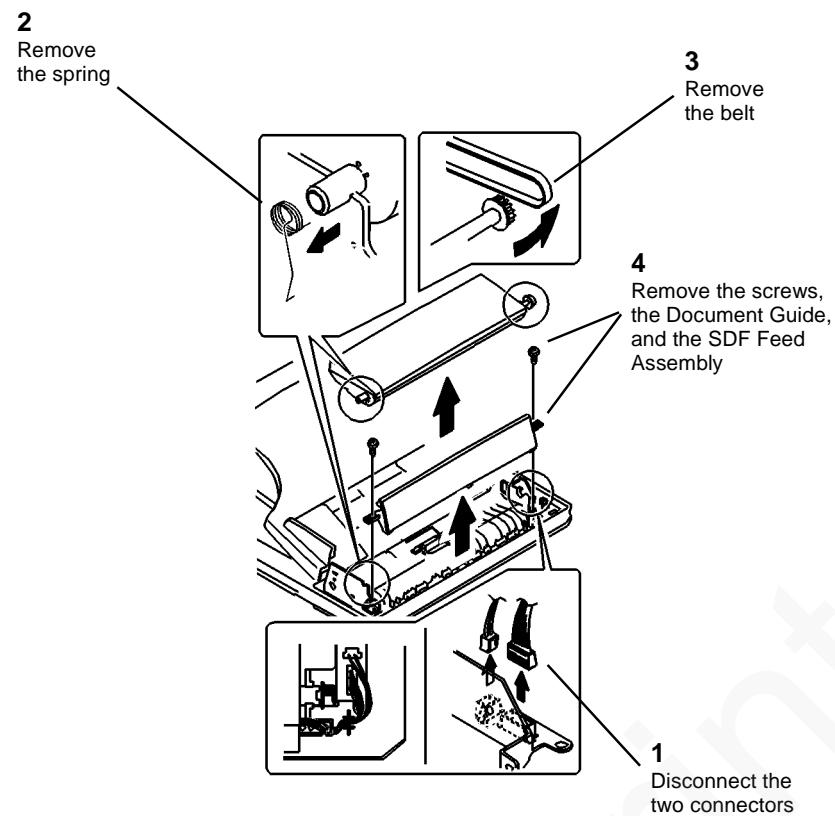
1. (Figure 1): Remove the Front Cover and the Rear Cover.



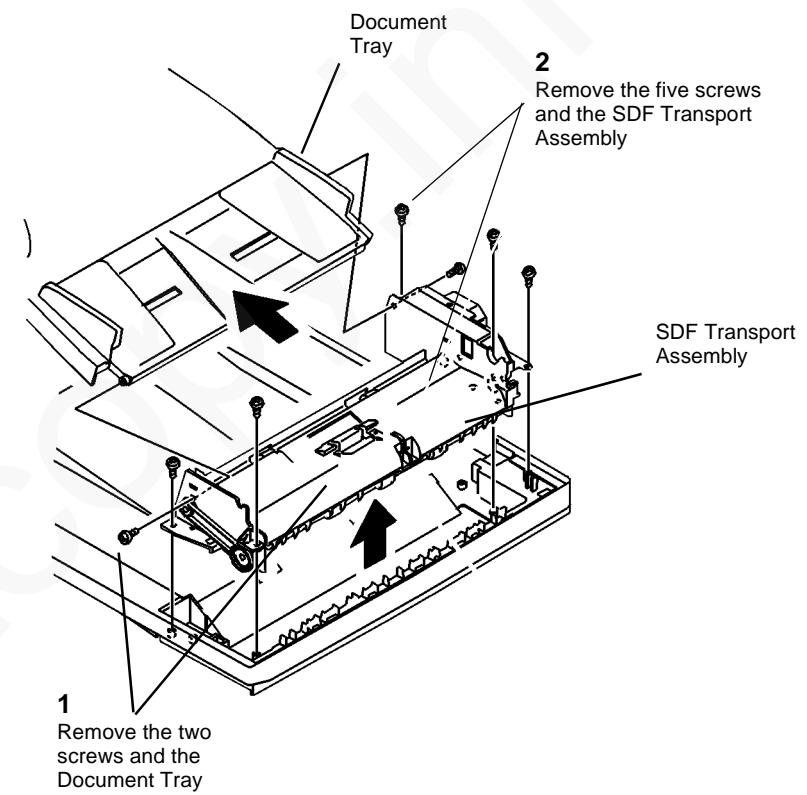
0500001A-SKY

Figure 1 Removing the Covers

2. (Figure 2): Remove the SDF Feed Assembly.



3. (Figure 3): Remove the Document Tray.



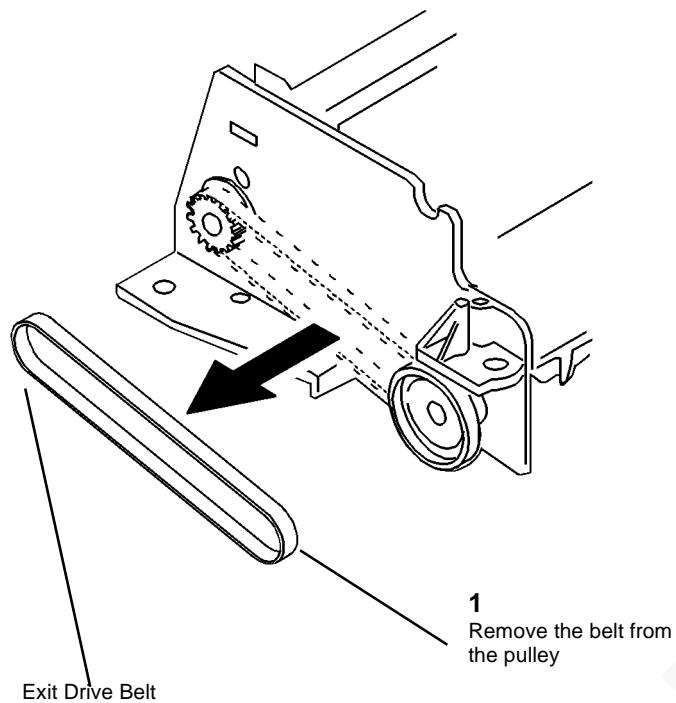
0500002A-SKY

0500010A-SKY

Figure 2 Removing the SDF Feed Assembly

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.



5. (Figure 5): Remove the SDF Drive Motor.

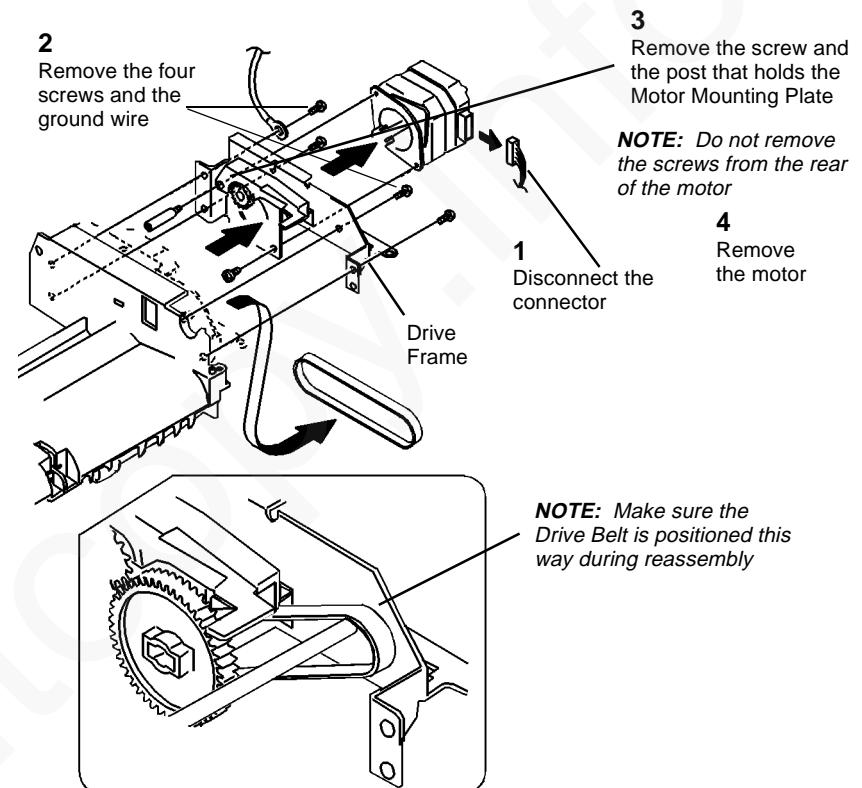


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

Figure 5 Removing the SDF Drive Motor

0500012A-SKY

REP 5.22 DSDF Feed Assembly

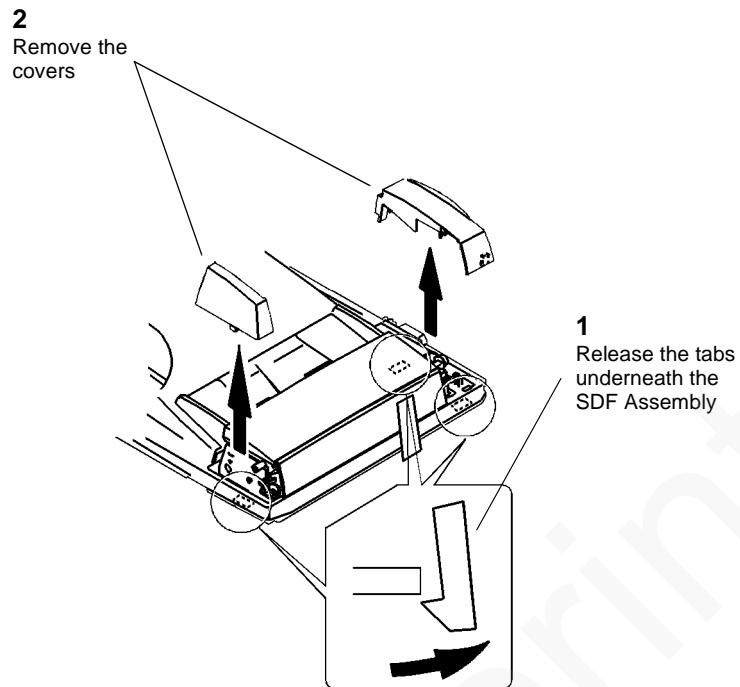
Parts List on PL 9.3

Removal

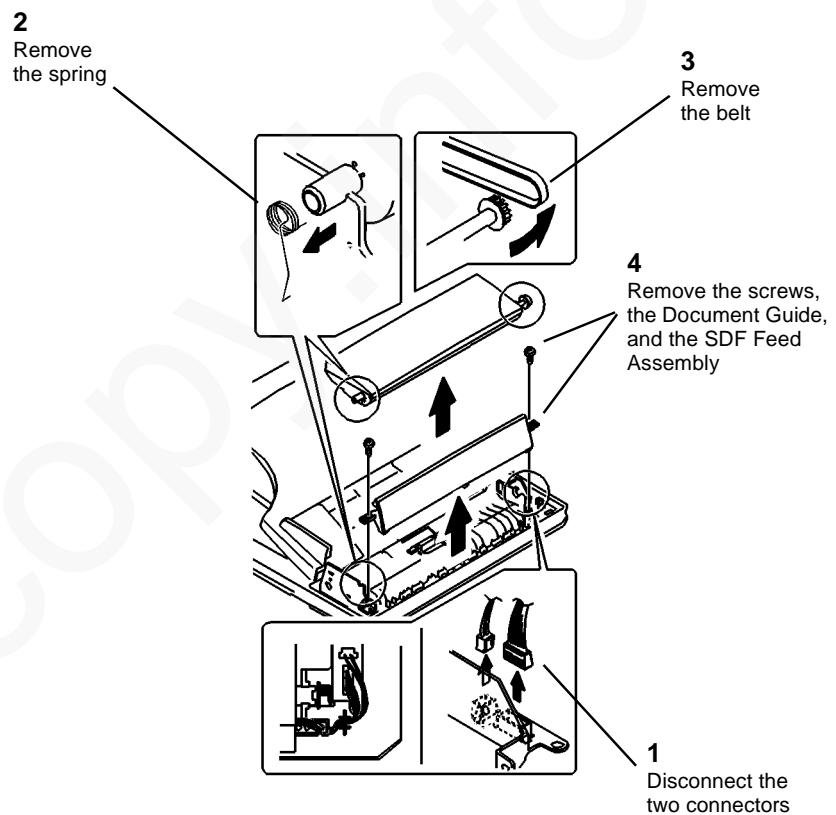
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



2. (Figure 2): Remove the SDF Feed Assembly.



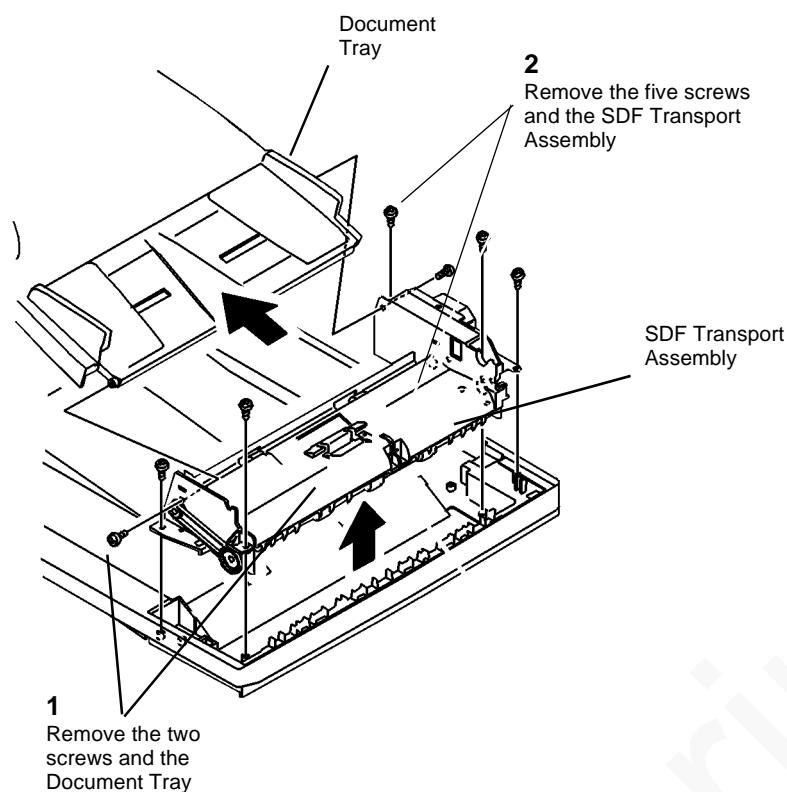
0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

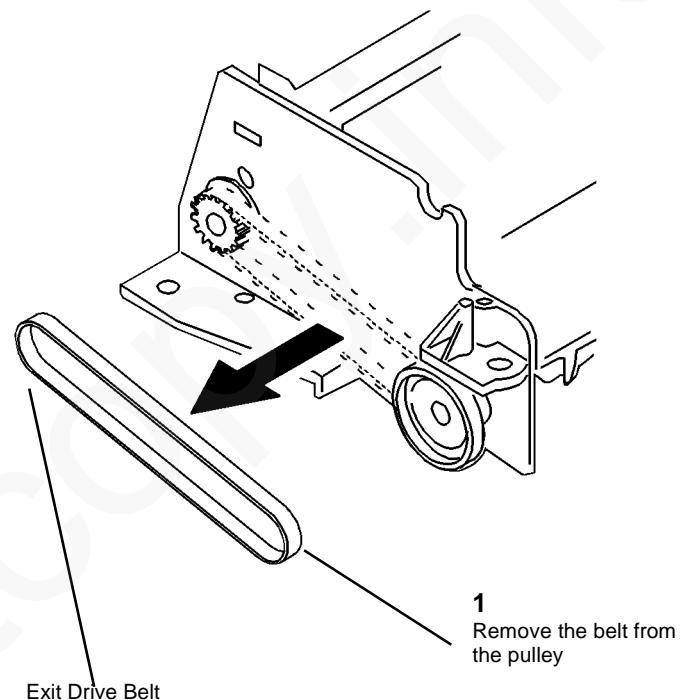
0500001A-SKY

Figure 1 Removing the Covers

3. (Figure 3): Remove the Document Tray.



4. (Figure 4): Remove the Exit Drive Belt.



0500010A-SKY

0500011A-SKY

Figure 3 Removing the Document Tray

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Document Path Sensor.

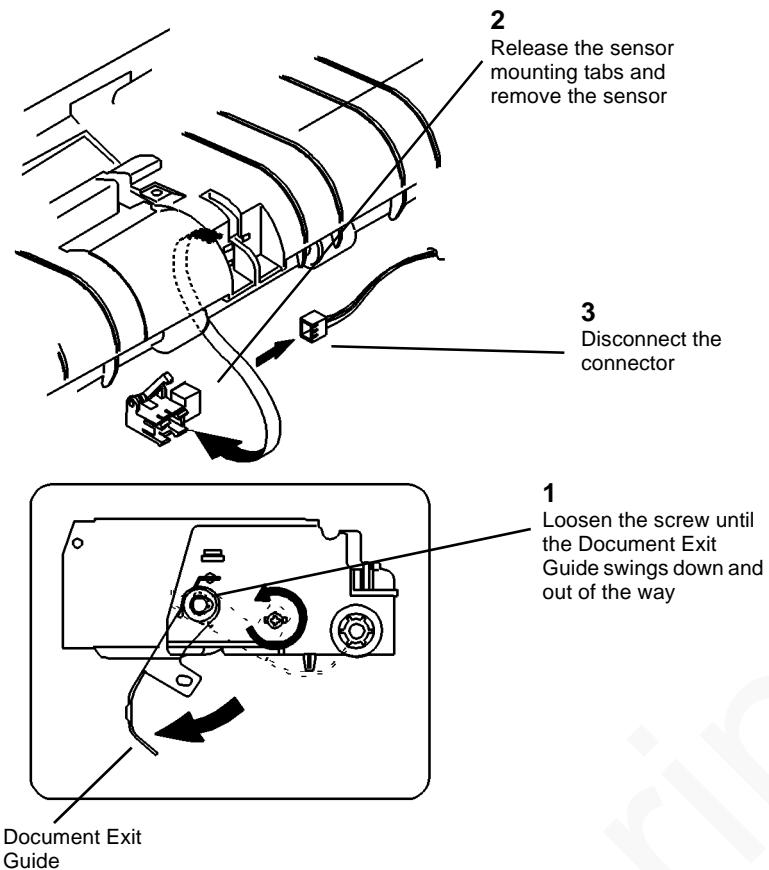


Figure 5 Removing the Document Path Sensor

REP 5.23 DSDF Transport Assembly

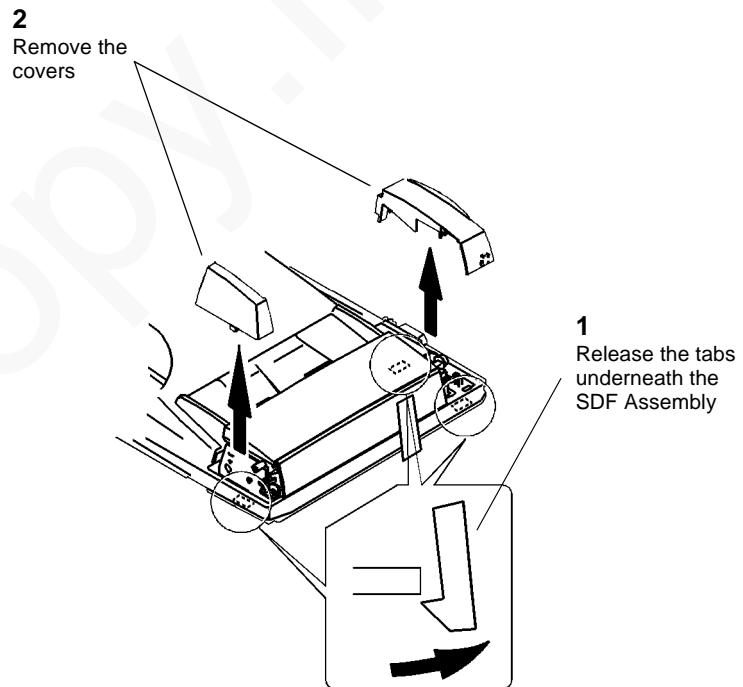
Parts List on PL 9.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

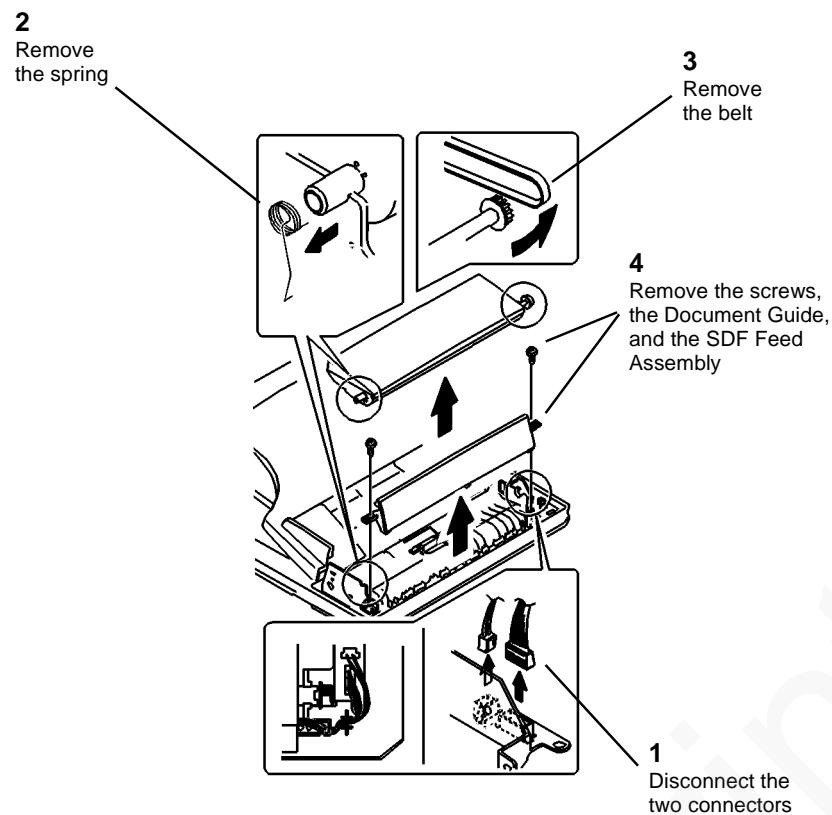
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

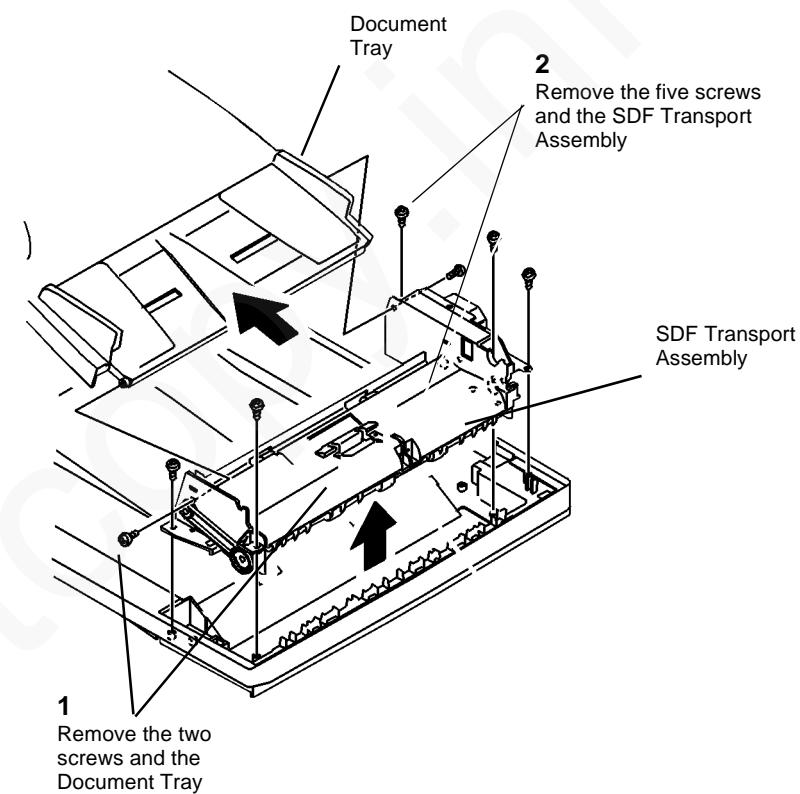
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

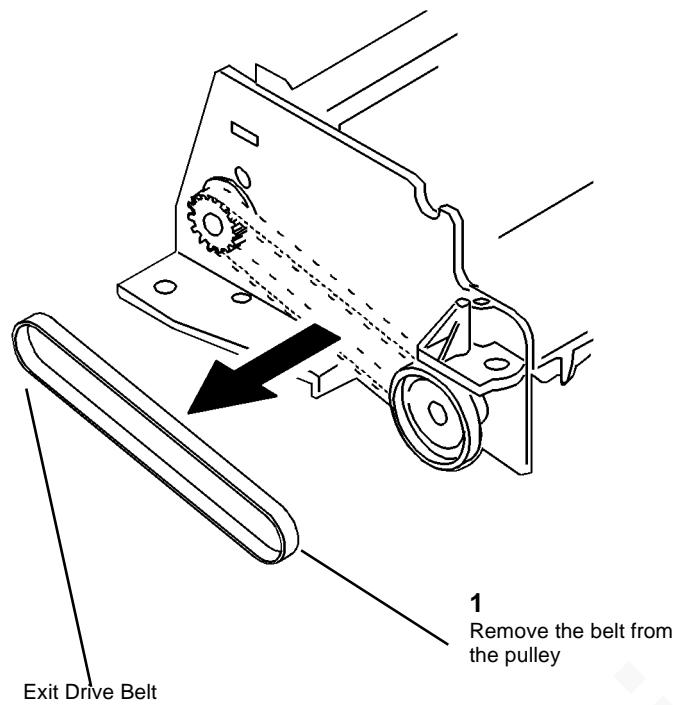
3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

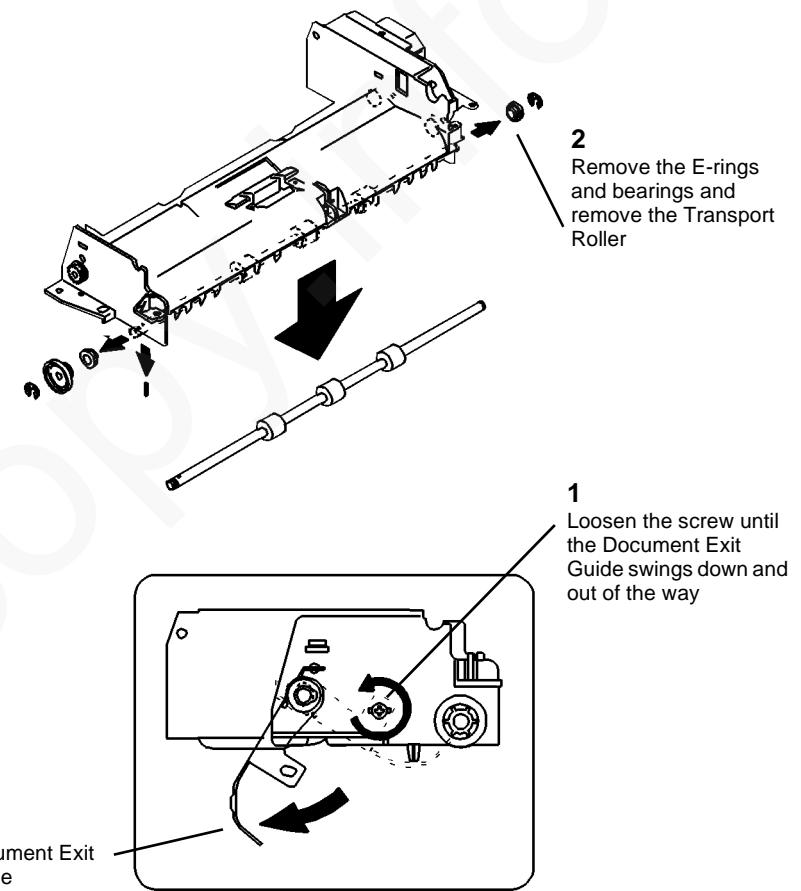
4. (Figure 4): Remove the Exit Drive Belt.



0500011A-SKY

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Transport Roller.



0500014A-SKY

Figure 5 Removing the Transport Roller

REP 5.24 DSDF Pinch Roll Solenoid (SOL2)

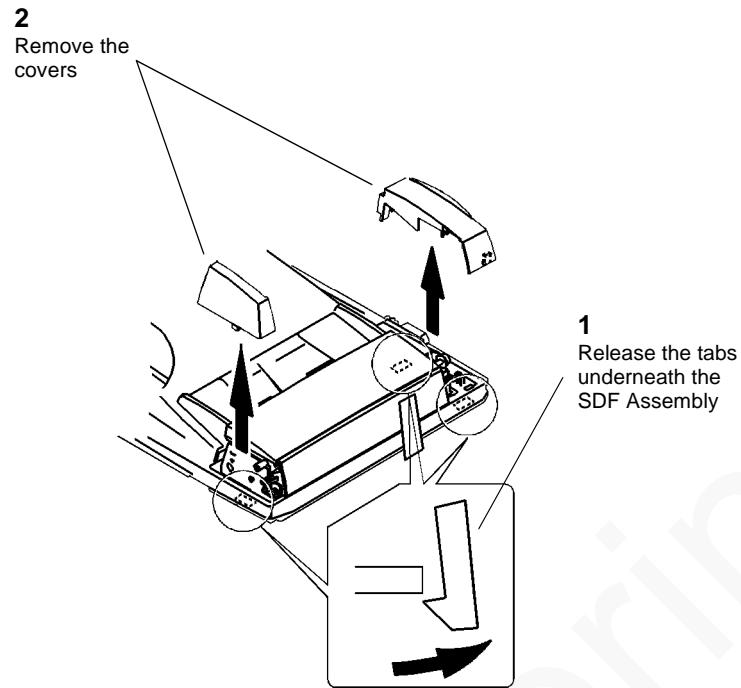
Parts List on PL 9.1

Removal

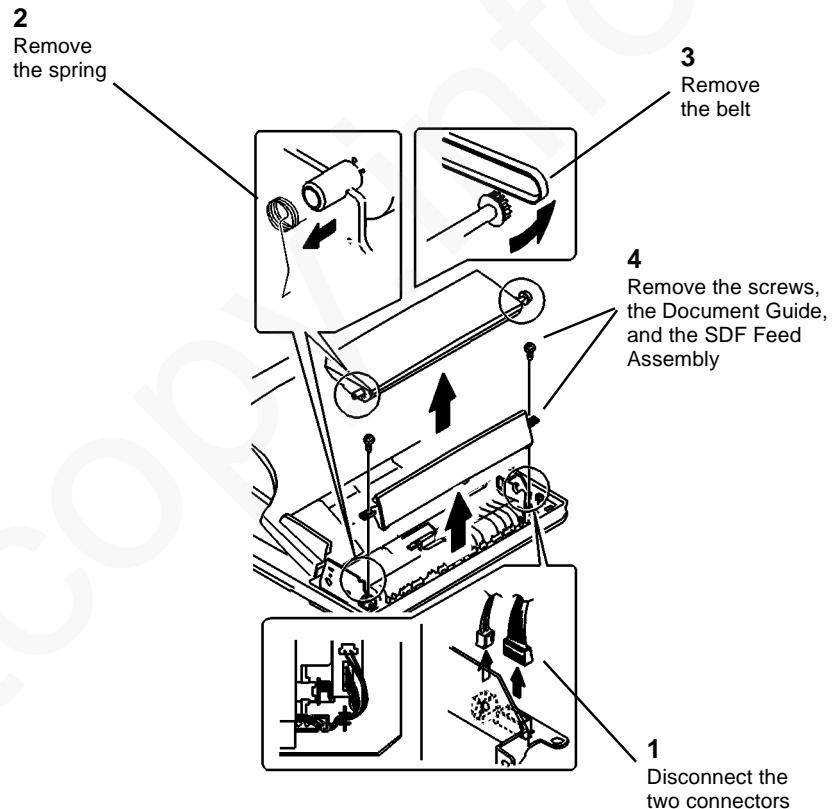
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



2. (Figure 2): Remove the SDF Feed Assembly.



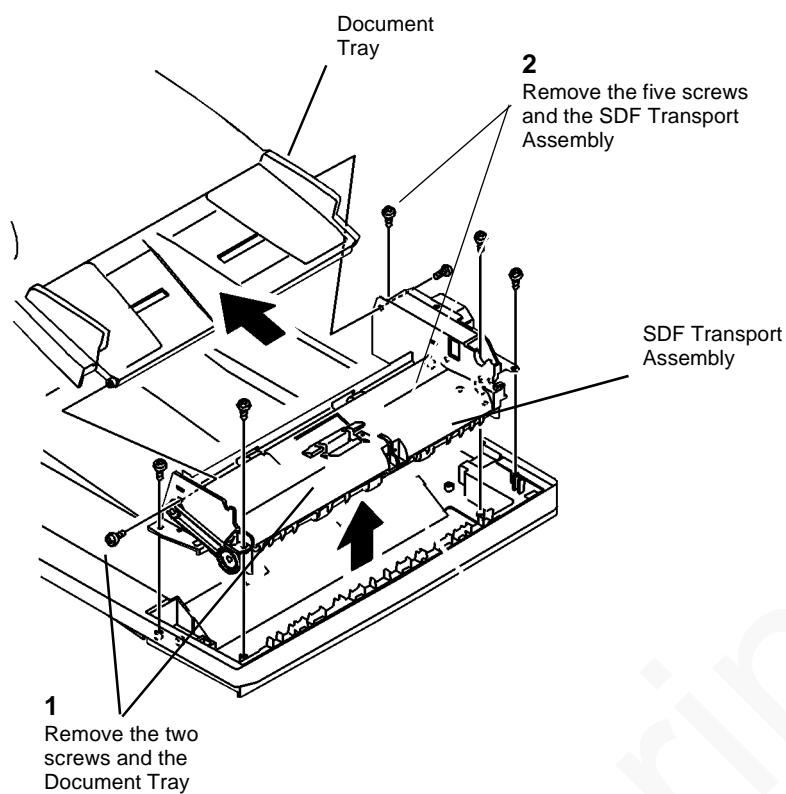
0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

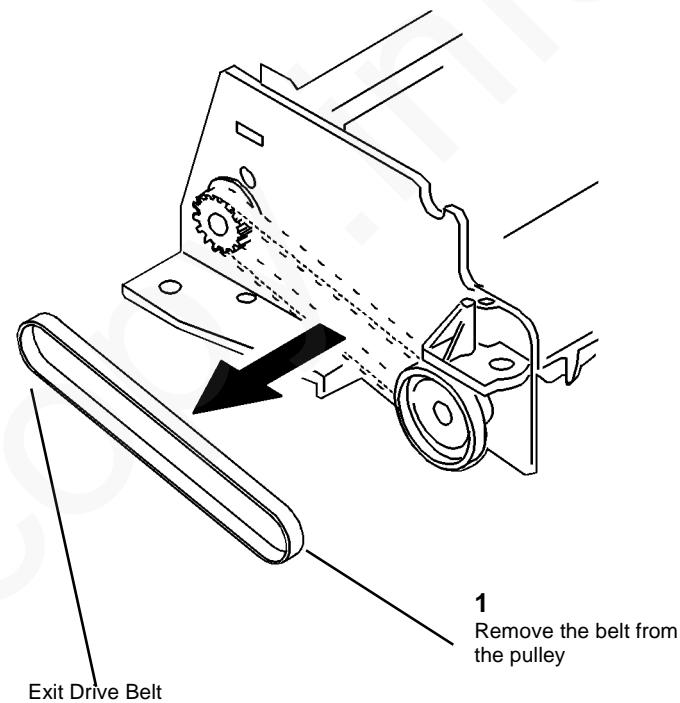
0500001A-SKY

Figure 1 Removing the Covers

3. (Figure 3): Remove the Document Tray.



4. (Figure 4): Remove the Exit Drive Belt.



0500010A-SKY

0500011A-SKY

Figure 3 Removing the Document Tray

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Exit Roller.

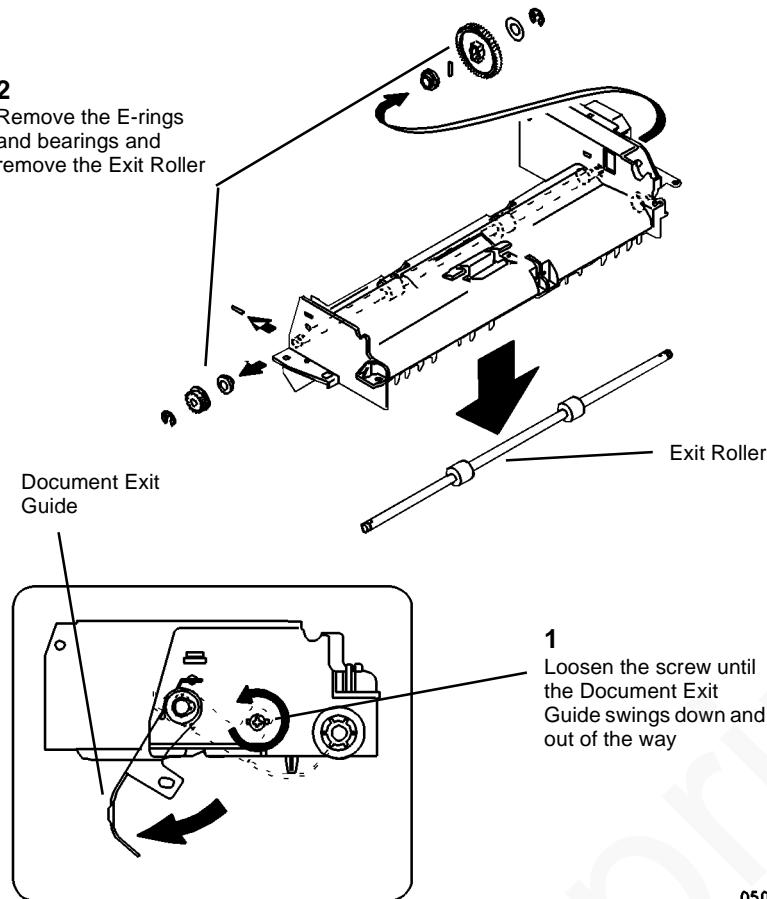


Figure 5 Removing the Exit Roller

REP 5.25 DSDF Exit Roller

Parts List on PL 9.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.

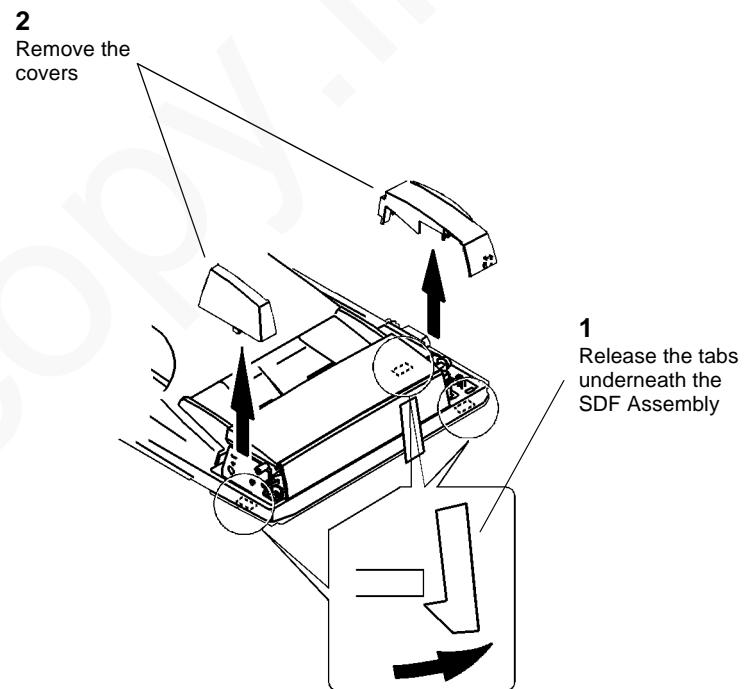
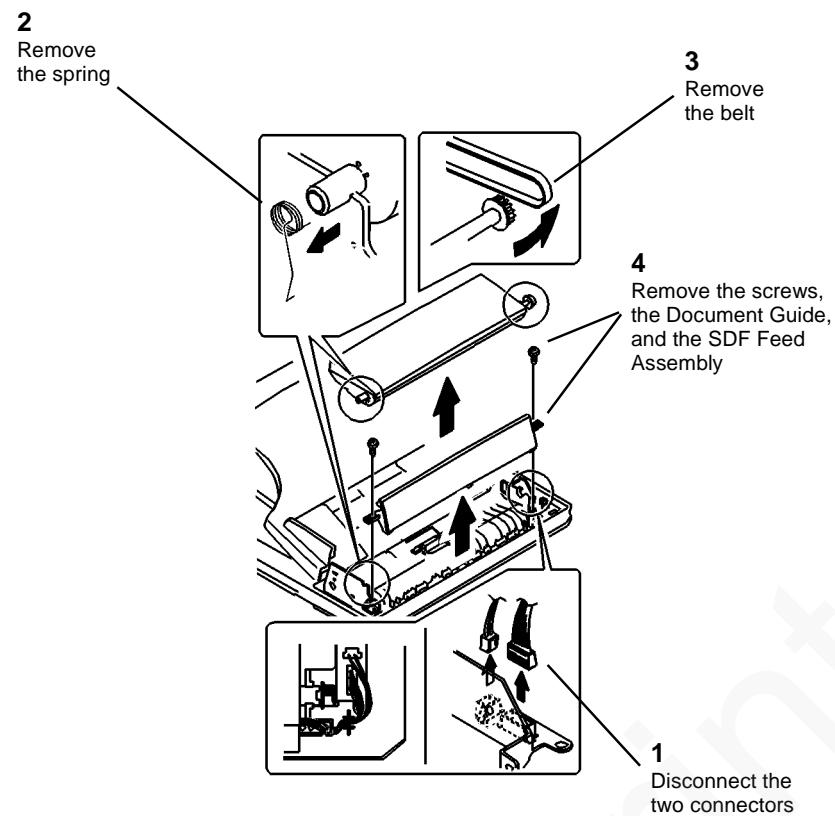
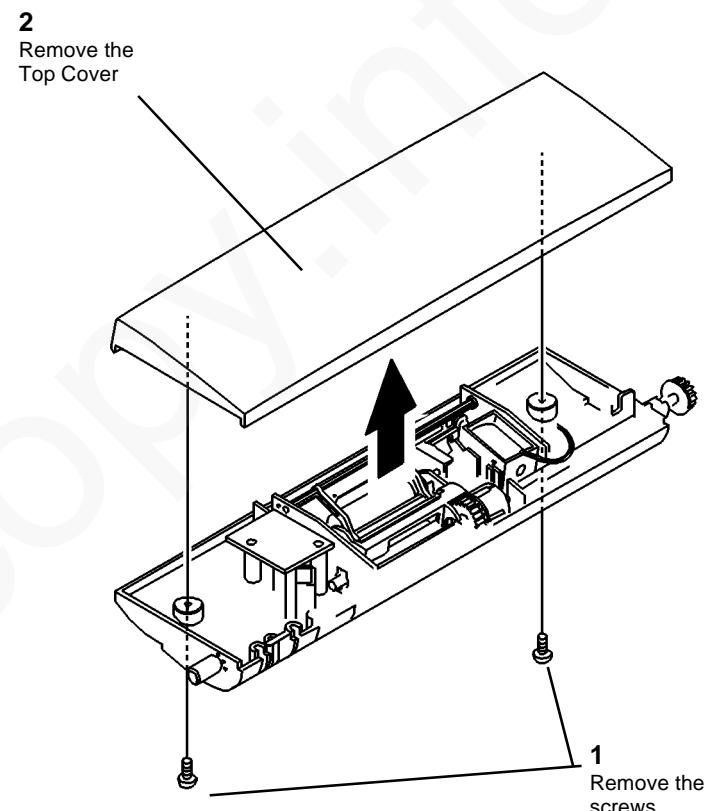


Figure 1 Removing the Covers

2. (Figure 2): Remove the SDF Feed Assembly.



3. (Figure 3): Remove the Top Cover.



0500002A-SKY

0500003A-SKY

Figure 2 Removing the SDF Feed Assembly

Figure 3 Removing the Top Cover

4. (Figure 4): Prepare to remove the clutch.

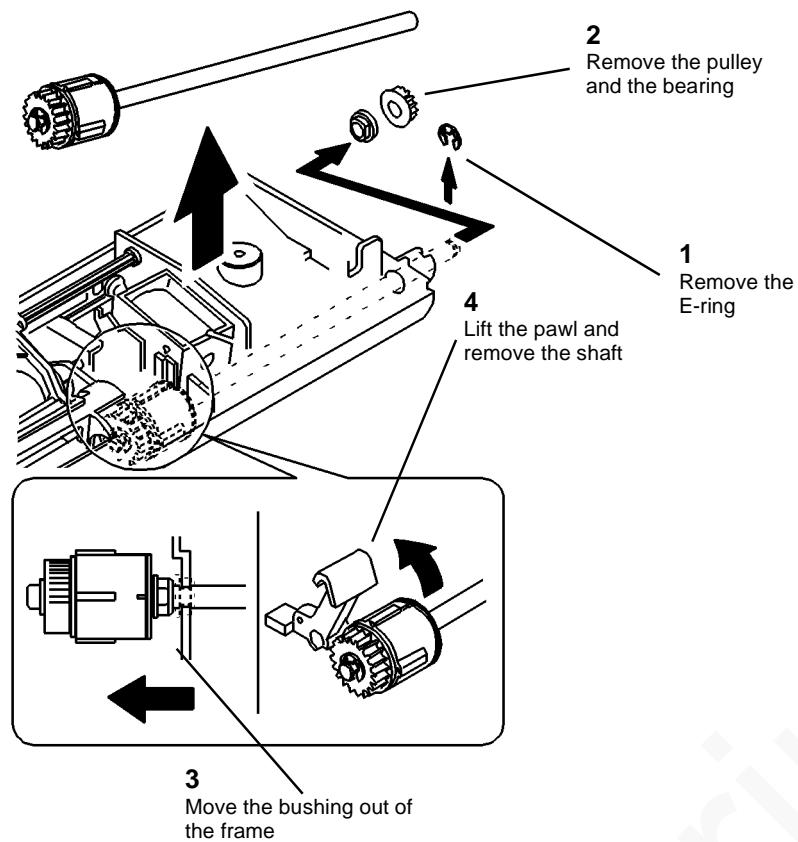
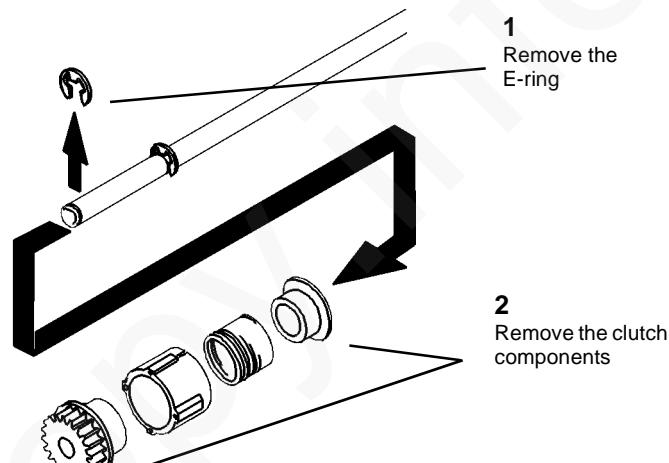


Figure 4 Preparing to Remove the Clutch

5. (Figure 5): Remove the clutch.



0500007A-SKY

Figure 5 Removing the Clutch

0500006A-SKY

REP 5.26 DSDF Transport Roller

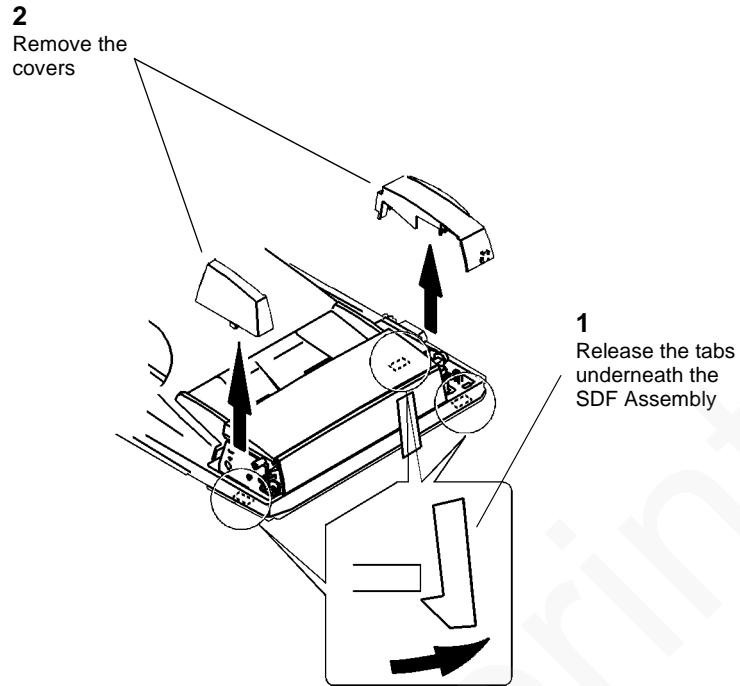
Parts List on PL 9.2

Removal

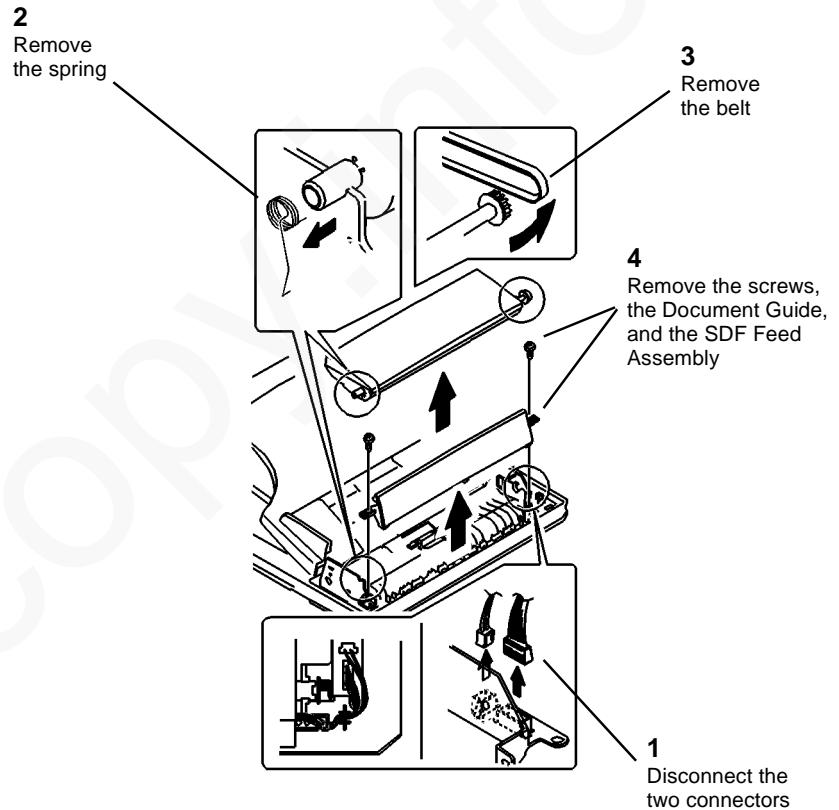
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



2. (Figure 2): Remove the SDF Feed Assembly.



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Figure 2 Removing the SDF Feed Assembly

0500001A-SKY

Figure 1 Removing the Covers

3. (Figure 3): Remove the Top Cover.

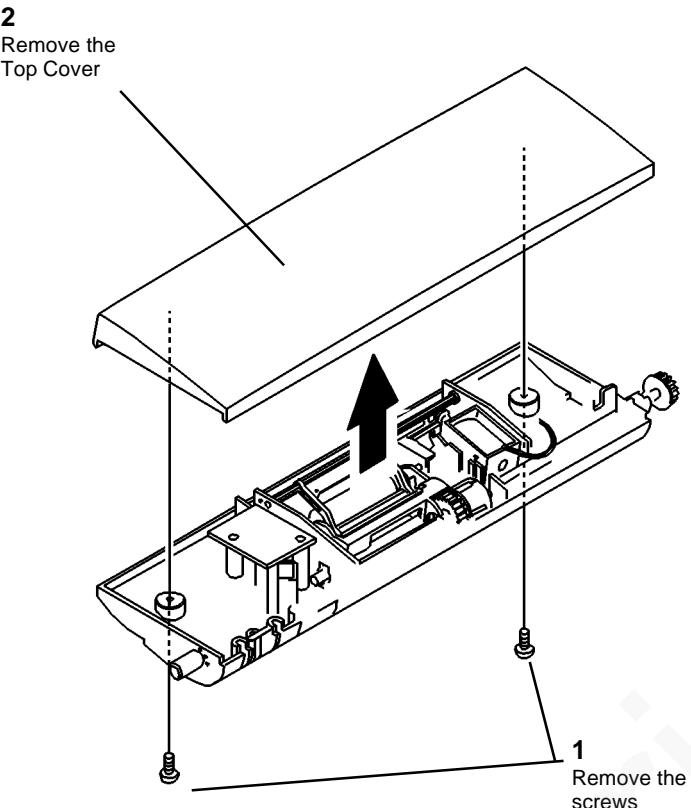


Figure 3 Removing the Top Cover

4. (Figure 4): Remove the Feed Roller Assembly.

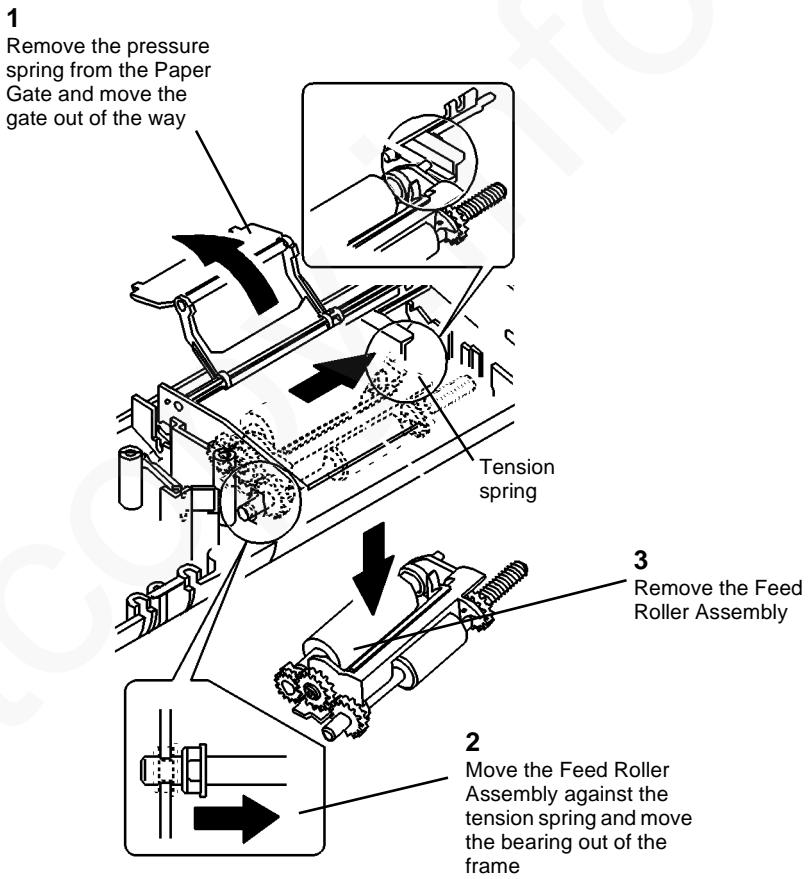
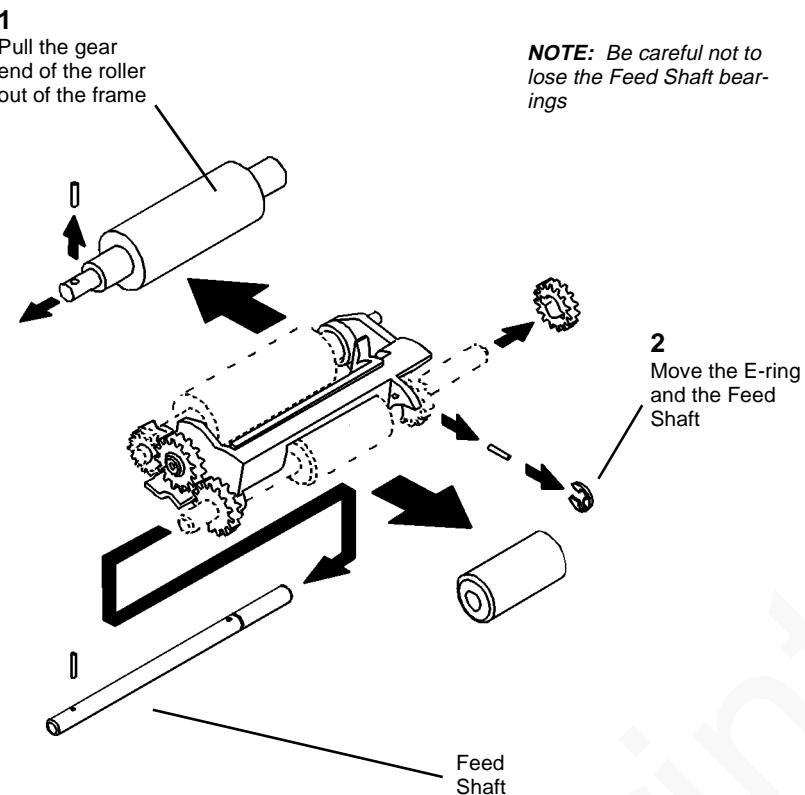


Figure 4 Removing the Feed Roller Assembly

5. (Figure 5): Remove the Retard Roller.



0500009A-SKY

Figure 5 Removing the Retard Roller

REP 5.27 DSDF Duplex Transport Roller

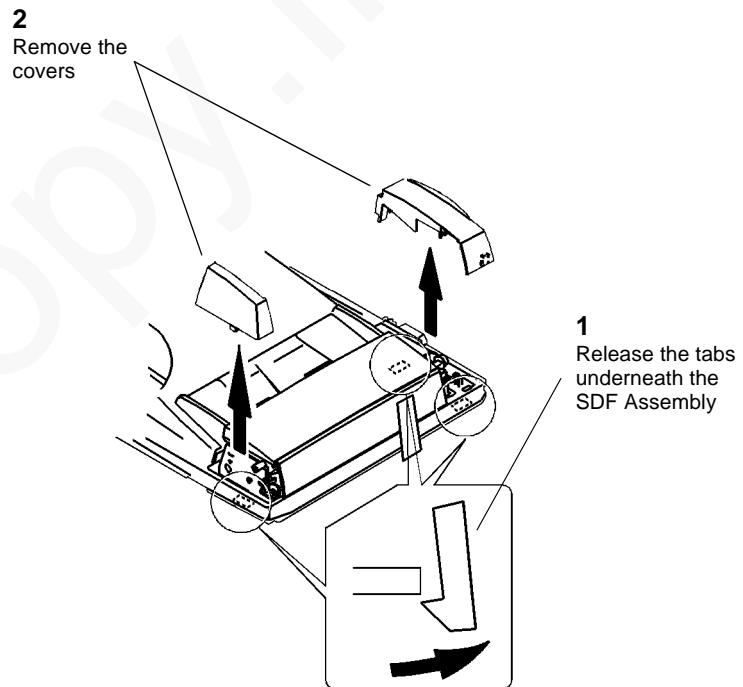
Parts List on PL 9.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

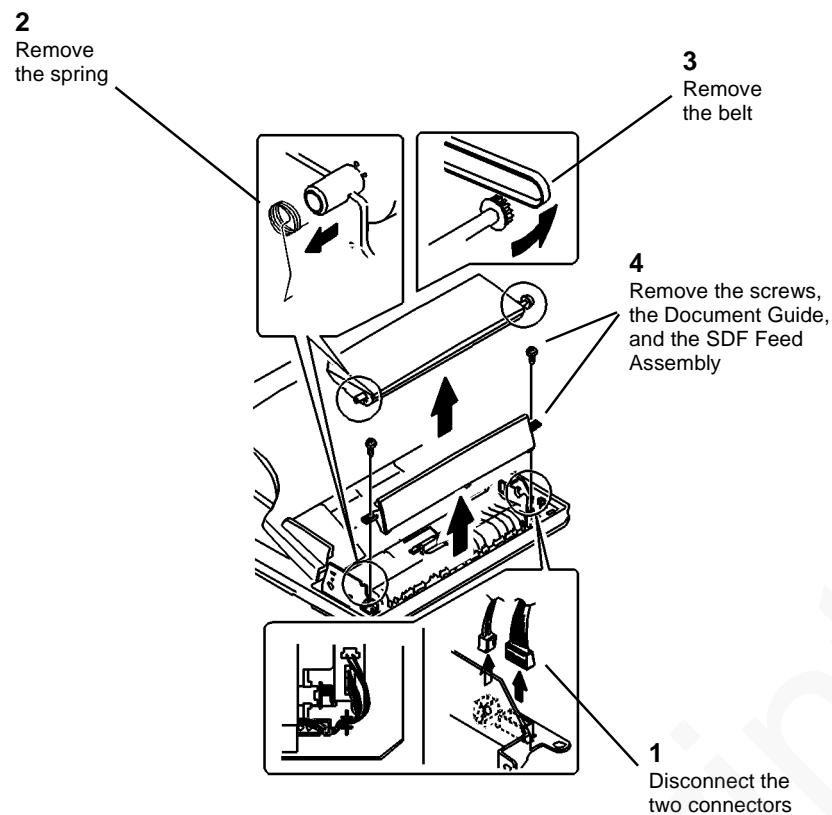
1. (Figure 1): Remove the Front Cover and the Rear Cover.



0500001A-SKY

Figure 1 Removing the Covers

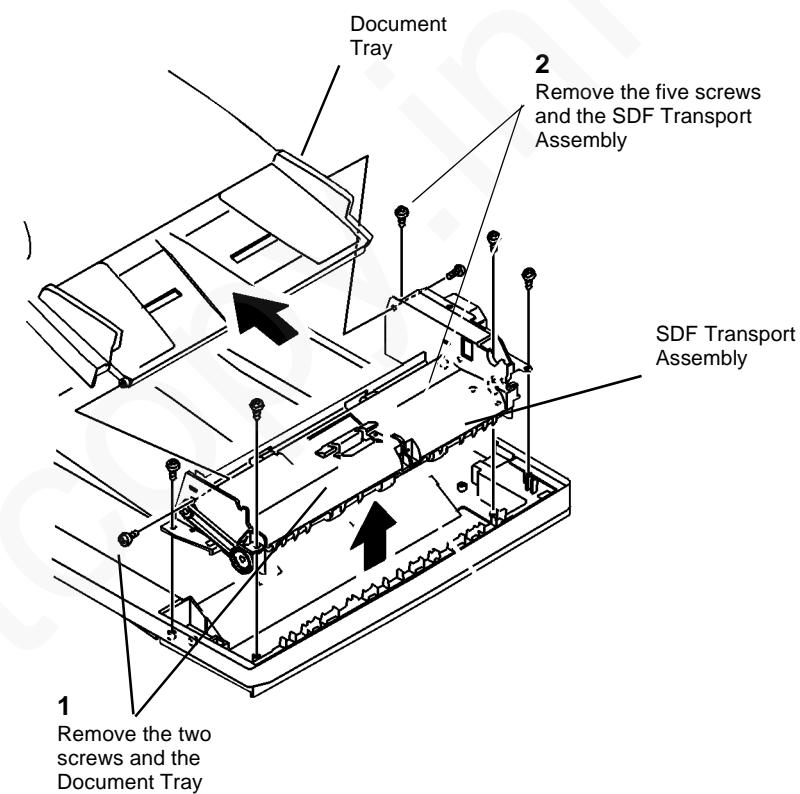
2. (Figure 2): Remove the SDF Feed Assembly.



0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

3. (Figure 3): Remove the Document Tray.



0500010A-SKY

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.

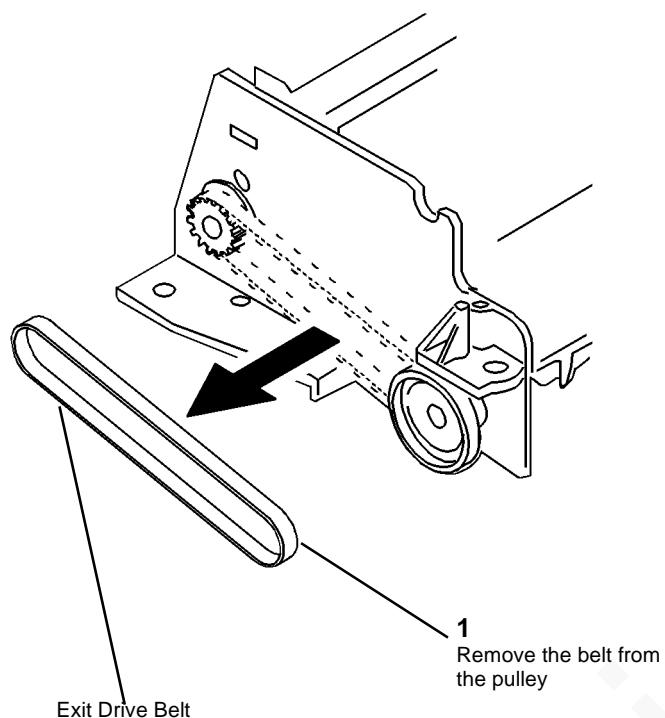


Figure 4 Removing the Exit Drive Belt

0500011A-SKY

REP 5.28 DSDF Duplex Drive Roller

Parts List on PL 1.4

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Unlatch the Transfer/Detact Corotron at each end and remove it.
2. (Figure 1): Remove the Inner Paper Guide.

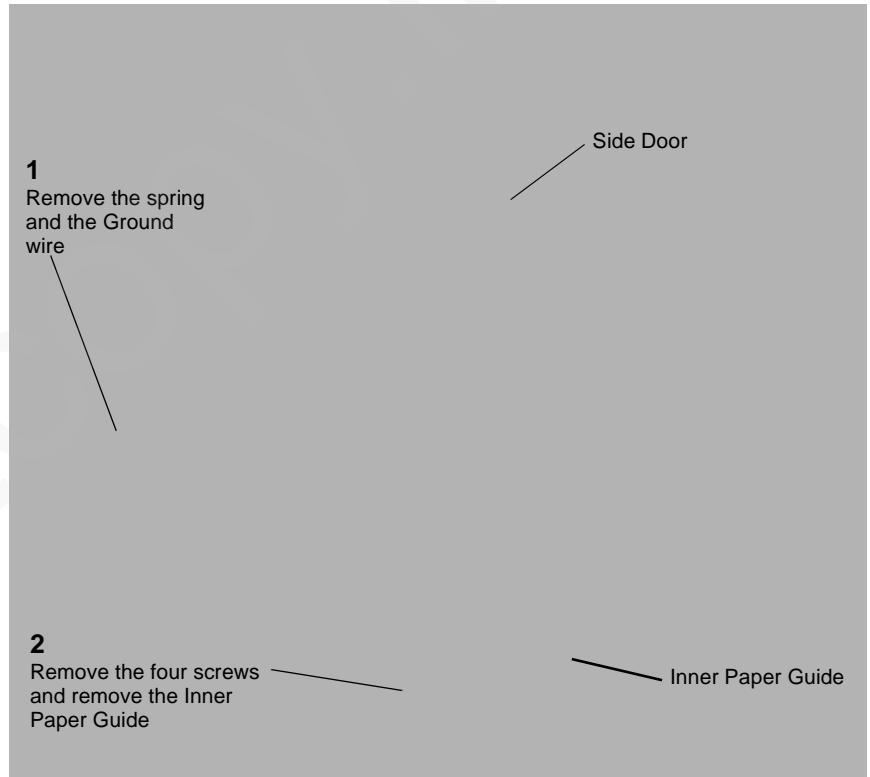


Figure 1 Removing the Covers

3. (Figure 2): Remove the Duplex Drive Roller.

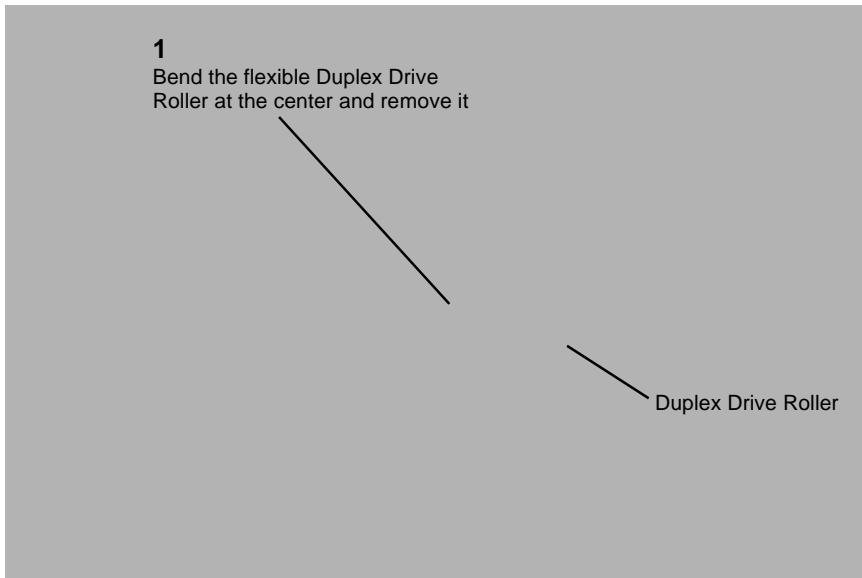


Figure 2 Removing the Duplex Drive Roller

REP 5.29 DSDF Deflection Solenoid (SOL3)

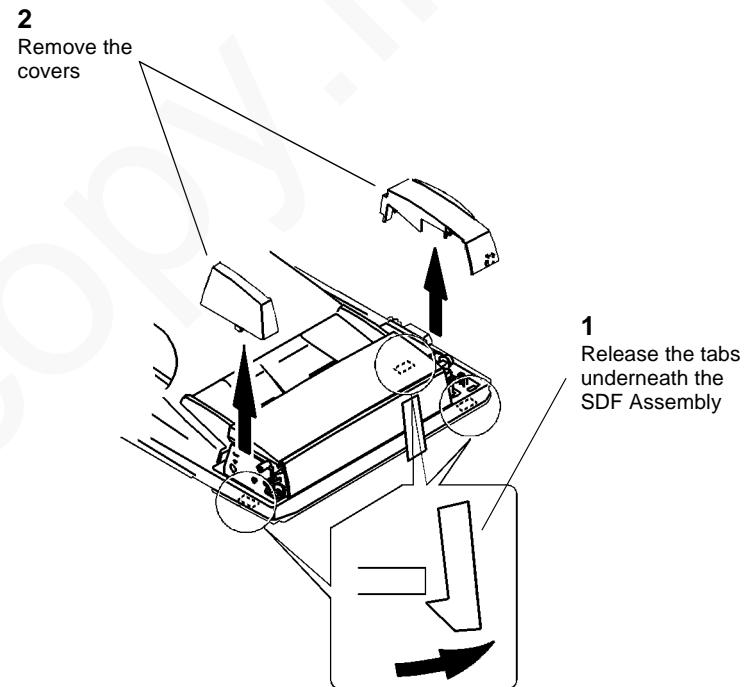
Parts List on PL 9.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

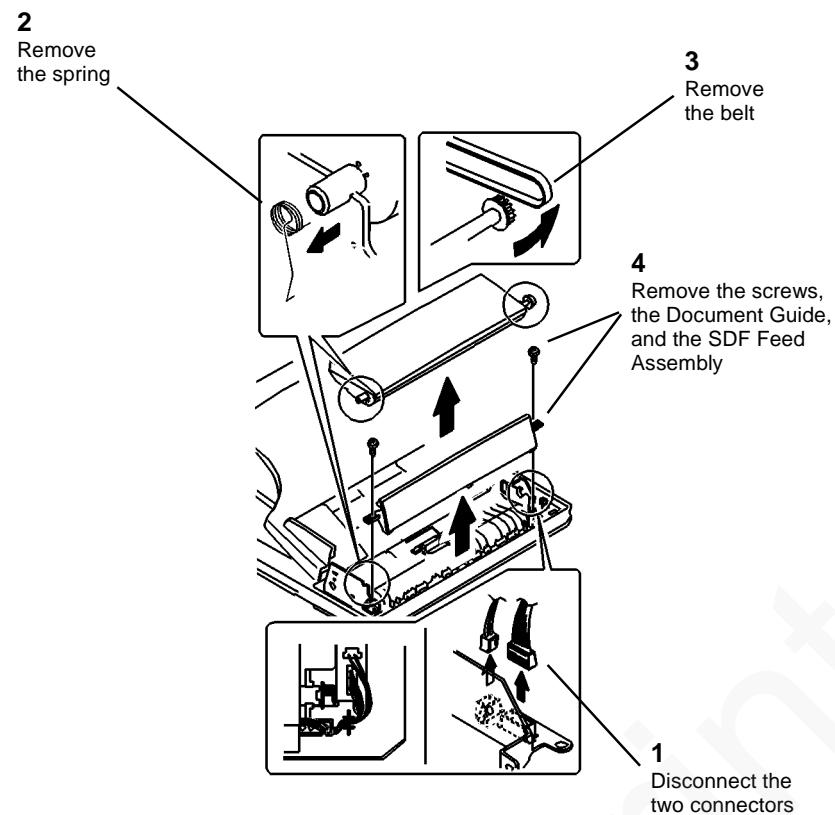
1. (Figure 1): Remove the Front Cover and the Rear Cover.



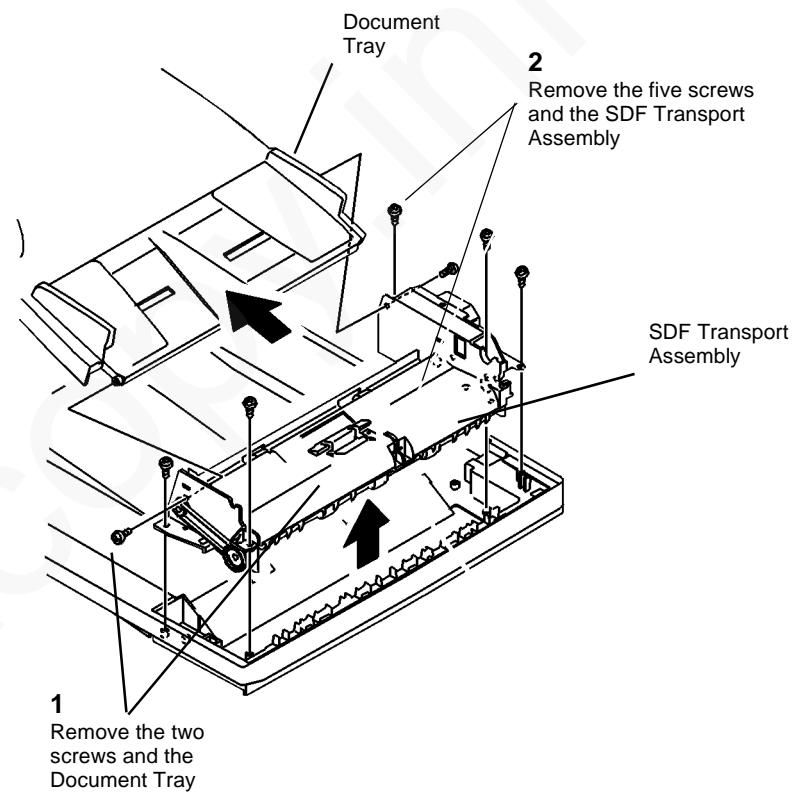
0500001A-SKY

Figure 1 Removing the Covers

2. (Figure 2): Remove the SDF Feed Assembly.



3. (Figure 3): Remove the Document Tray.



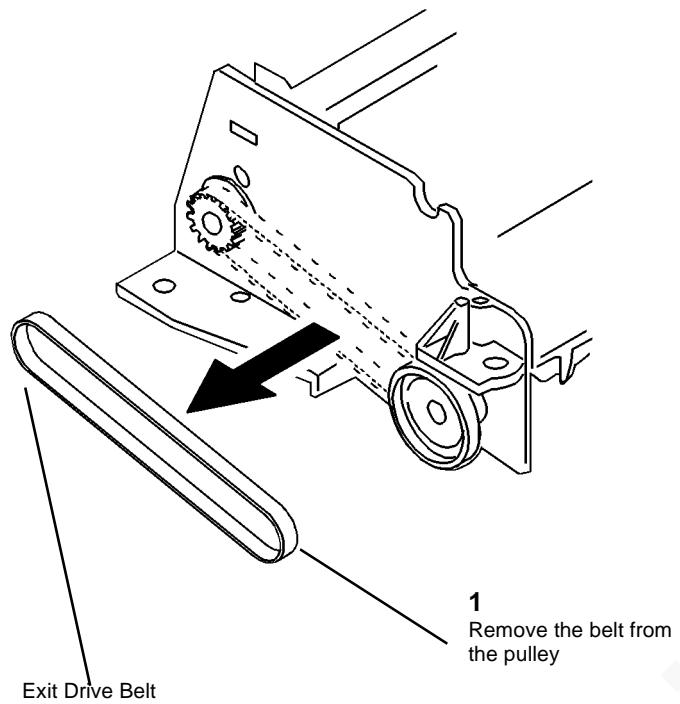
0500002A-SKY

0500010A-SKY

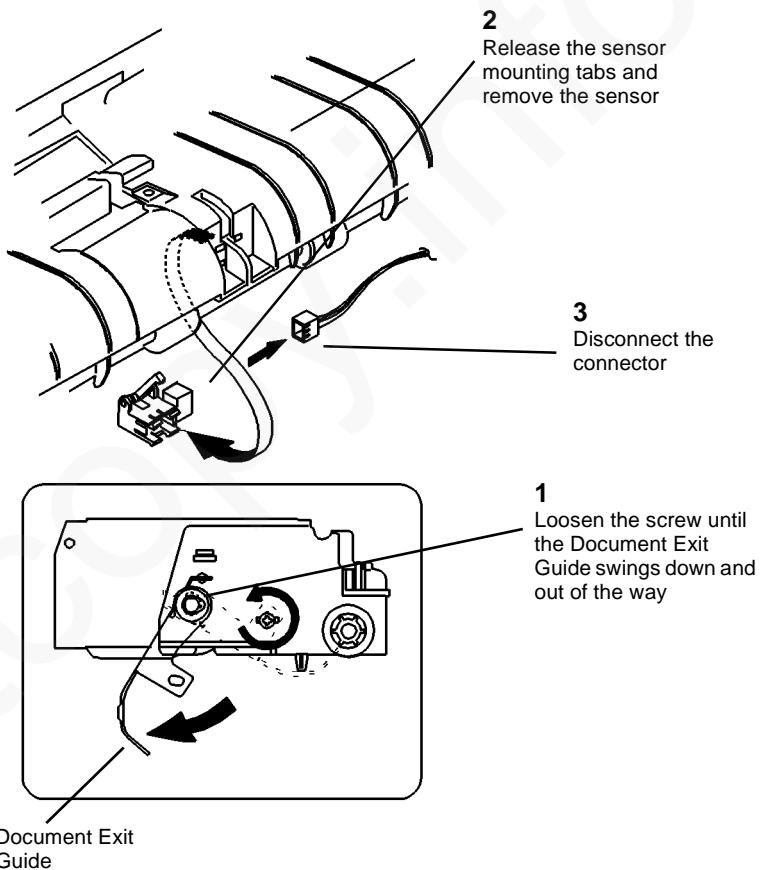
Figure 2 Removing the SDF Feed Assembly

Figure 3 Removing the Document Tray

4. (Figure 4): Remove the Exit Drive Belt.



5. (Figure 5): Remove the Document Path Sensor.



0500011A-SKY

Figure 4 Removing the Exit Drive Belt

0500013A-SKY

Figure 5 Removing the Document Path Sensor

REP 5.30 DSDF Duplex Drive Motor (MOT5)

Parts List on PL 9.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover/Document Feeder Assembly.
2. (Figure 1): Remove the Rear Cover and the Access Cover.

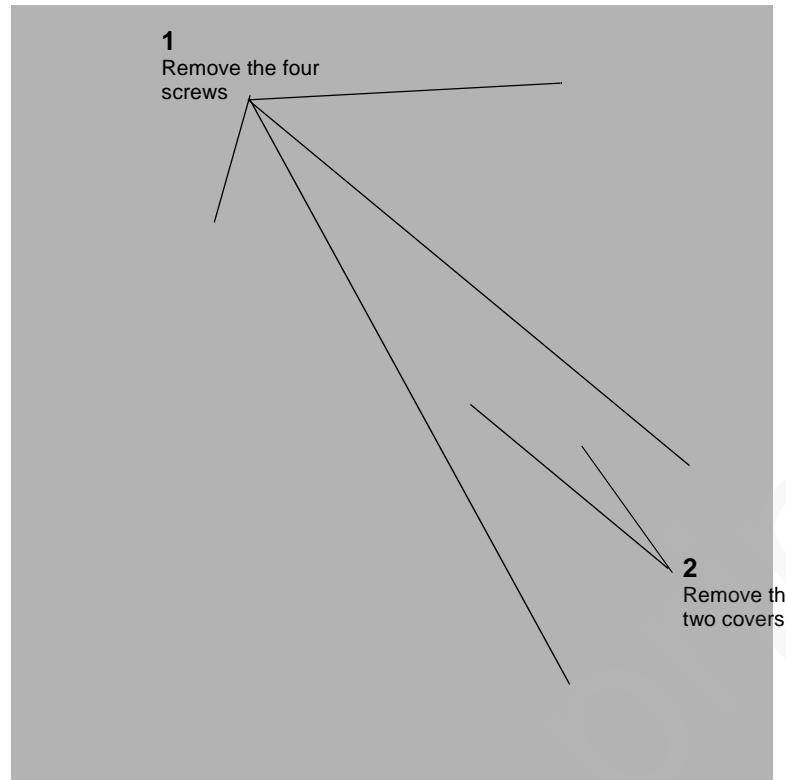


Figure 1 Removing the Covers

3. (Figure 2): Remove the PWB Cover.

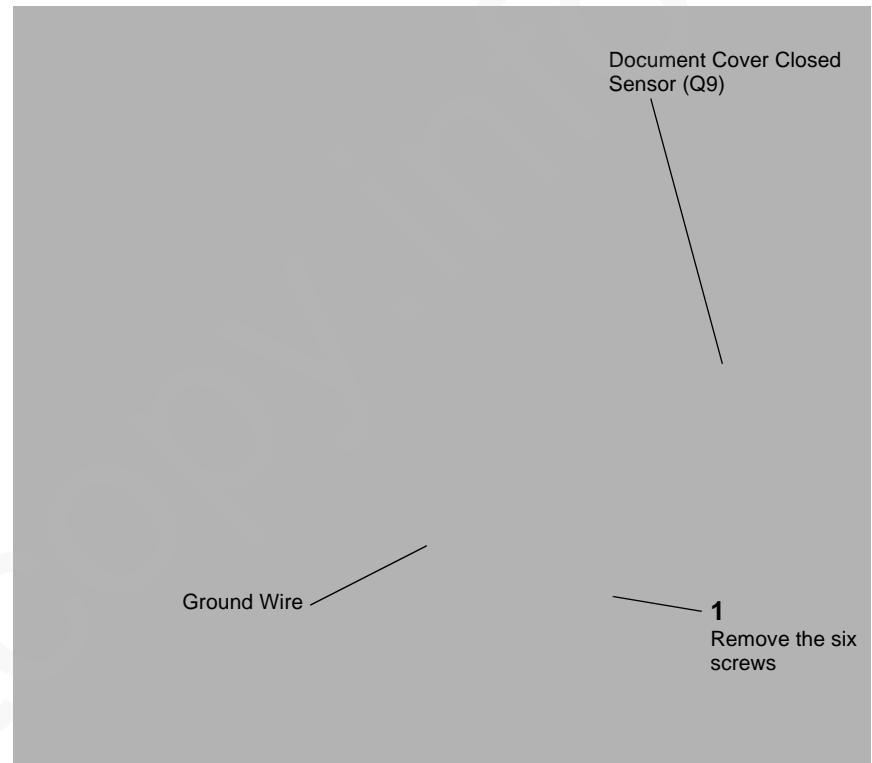


Figure 2 Removing the PWB Cover

4. (Figure 3): Remove the Main PWB.

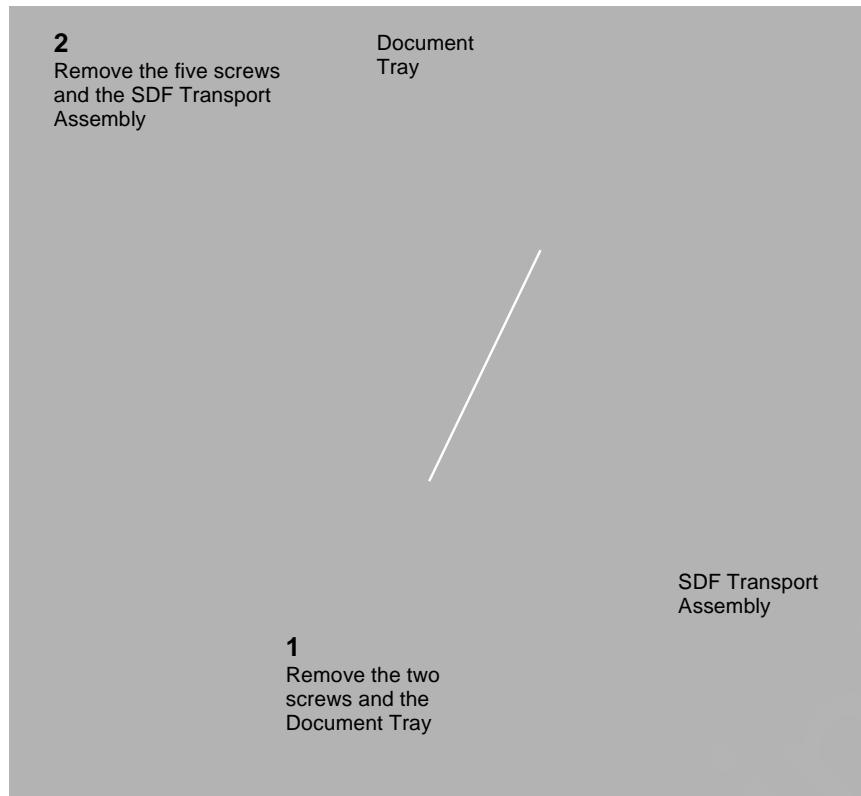


Figure 3 Removing the Main PWB

5. (Figure 4): Remove the Duplex Drive Motor (MOT5).

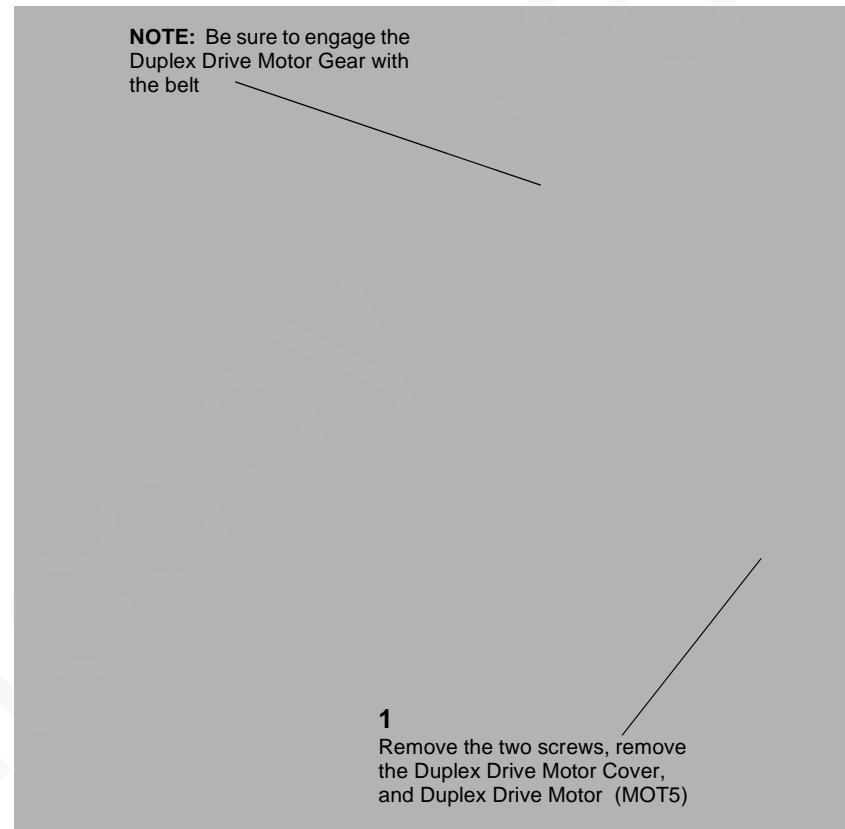


Figure 4 Removing the Duplex Drive Motor (MOT5)

REP 5.31 DSDF Clutch (CL1)

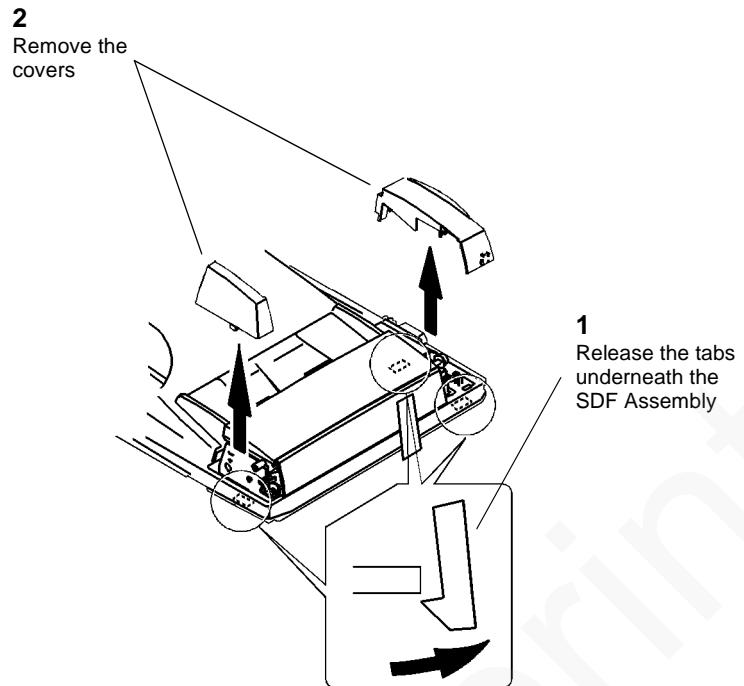
Parts List on PL 9.1

Removal

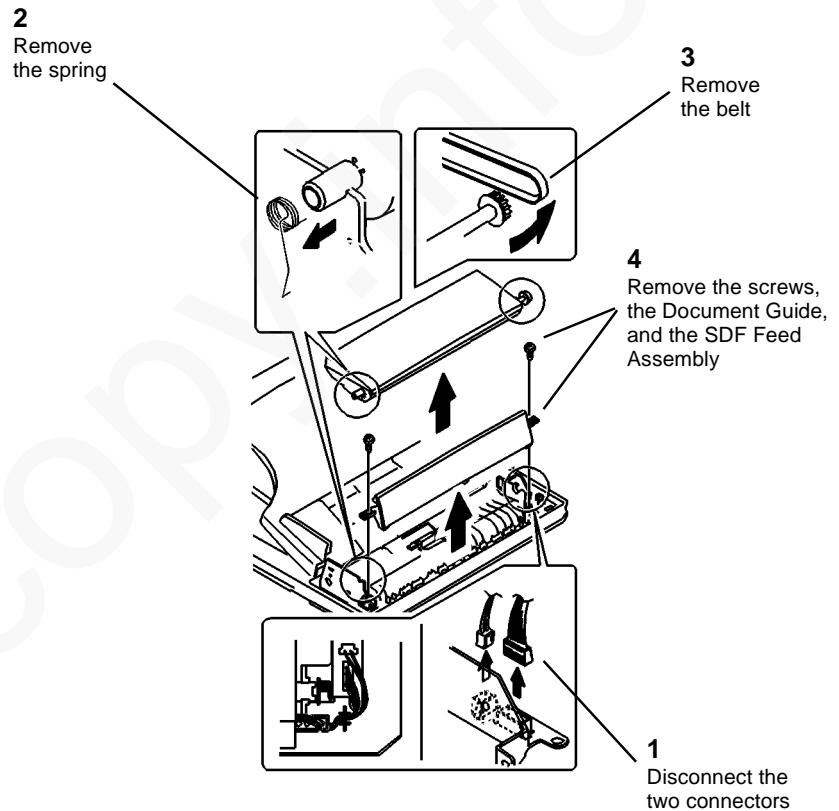
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Front Cover and the Rear Cover.



2. (Figure 2): Remove the SDF Feed Assembly.



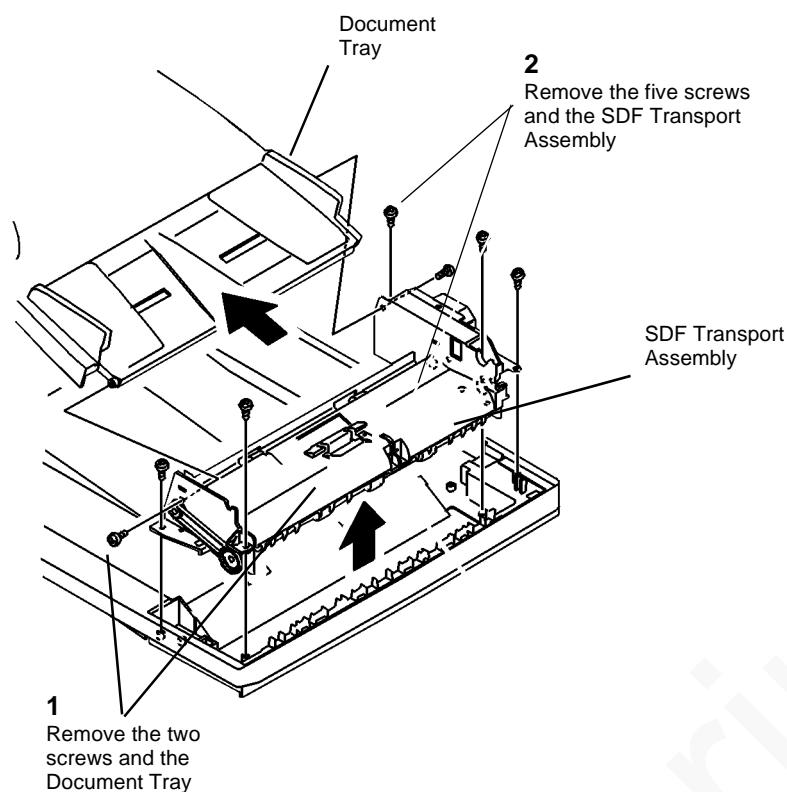
0500002A-SKY

Figure 2 Removing the SDF Feed Assembly

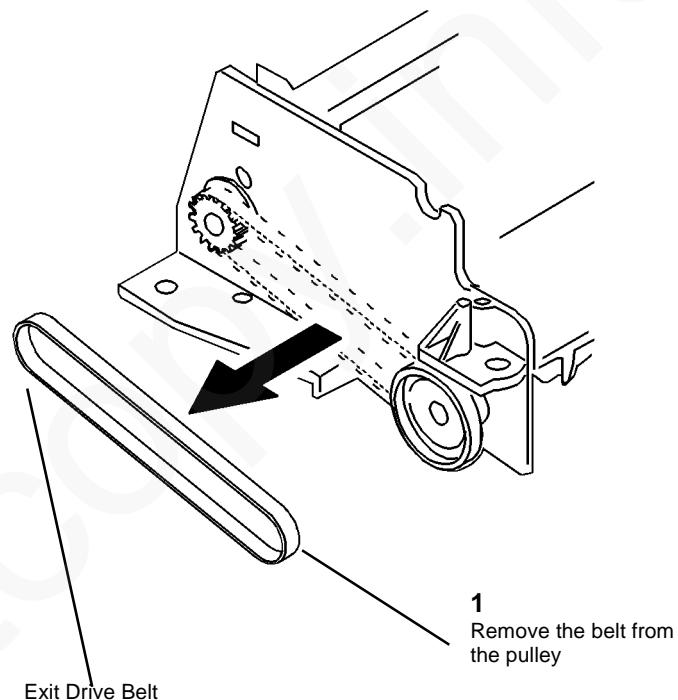
0500001A-SKY

Figure 1 Removing the Covers

3. (Figure 3): Remove the Document Tray.



4. (Figure 4): Remove the Exit Drive Belt.



0500010A-SKY

0500011A-SKY

Figure 3 Removing the Document Tray

Figure 4 Removing the Exit Drive Belt

5. (Figure 5): Remove the Exit Roller.

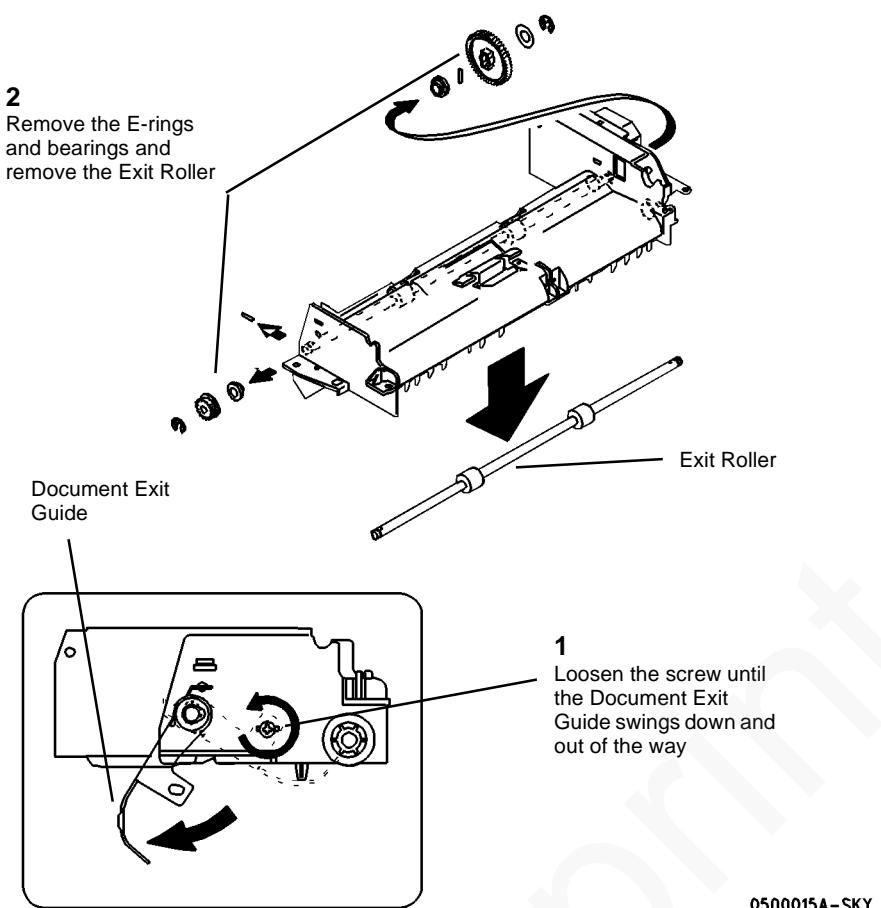


Figure 5 Removing the Exit Roller

REP 6.1 Document Glass Assembly

Parts List on PL 1.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
2. (Figure 1): Remove the Document Glass Assembly.

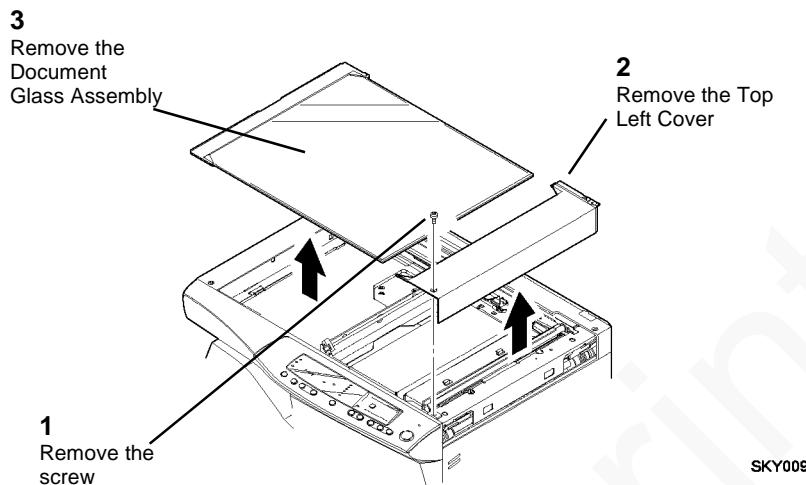


Figure 1 Removing the Document Glass Assembly

SKY009N

REP 6.2 Exposure Lamp Carriage

Parts List on PL 3.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Document Glass Assembly (REP 6.1)
2. (Figure 1): Prepare to remove the Exposure Lamp Carriage.

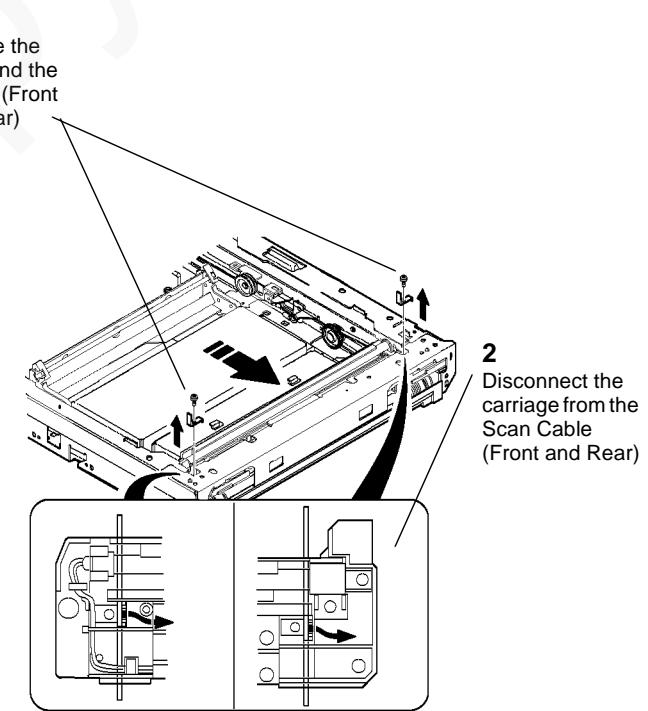


Figure 1 Preparing to Remove the Exposure Lamp Carriage

SKY010T

CAUTION

Be careful not to damage the ribbon cable.

3. (Figure 2): Remove the Exposure Lamp Carriage.

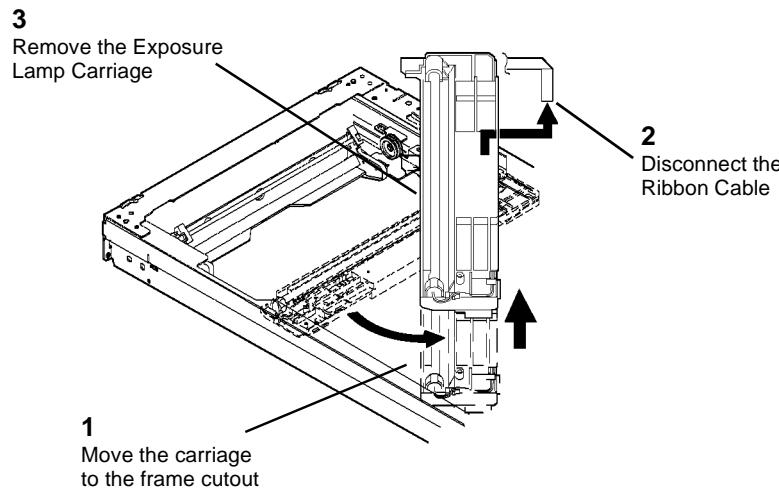


Figure 2 Removing the Exposure Lamp Carriage

REP 6.3 Scan Drive Motor (MOT2)**Parts List on PL 3.1****Removal****WARNING**

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the PWB Cover (PL 7.1).
4. (Figure 1): Remove the Scan Drive Motor.

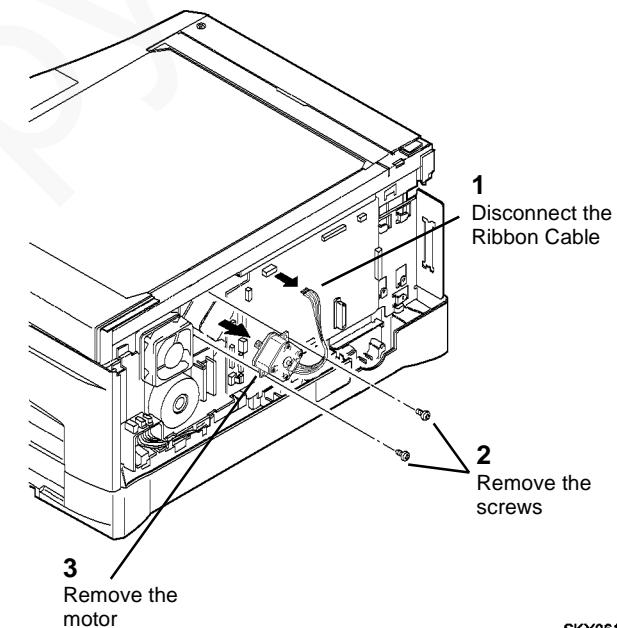


Figure 1 Removing the Scan Drive Motor

REP 6.4 Laser Module

Parts List on PL 3.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Exit Roller (REP 8.9)
 - k. Manual Exit Drive Belt (REP 8.10)
2. (Figure 1): Remove the Laser Module.

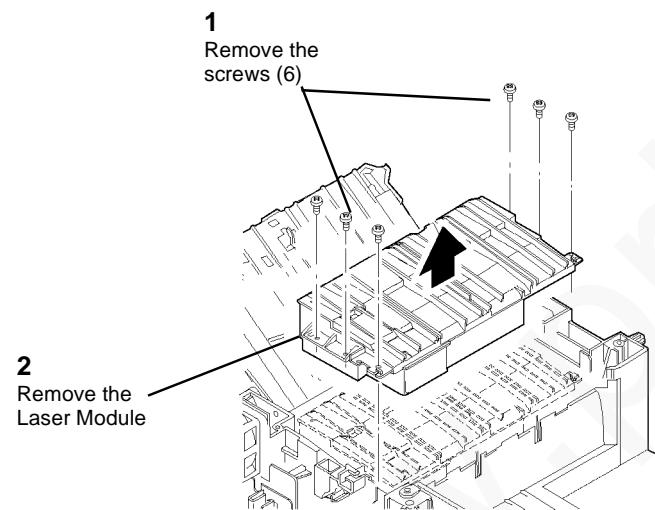


Figure 1 Removing the Laser Module

REP 6.5 Lens/CCD Module

Parts List on PL 3.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
2. Remove the Document Glass Assembly (REP 6.1).
3. (Figure 1): Remove the Lens/CCD Module.

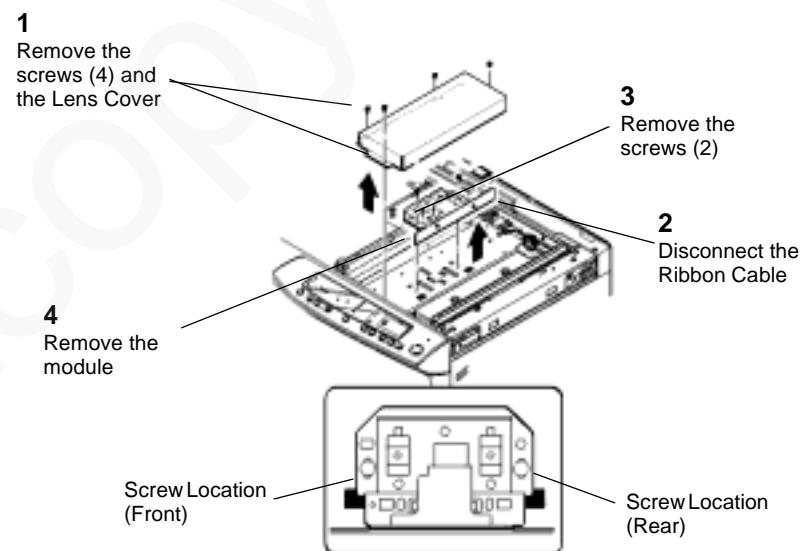


Figure 1 Removing the Lens/CCD Module

Replacement

SKY039N

1. If the Lens/CCD Module is being replaced, perform Lens/CCD Module (ADJ 6.2).

REP 6.6 Optics Frame Assembly

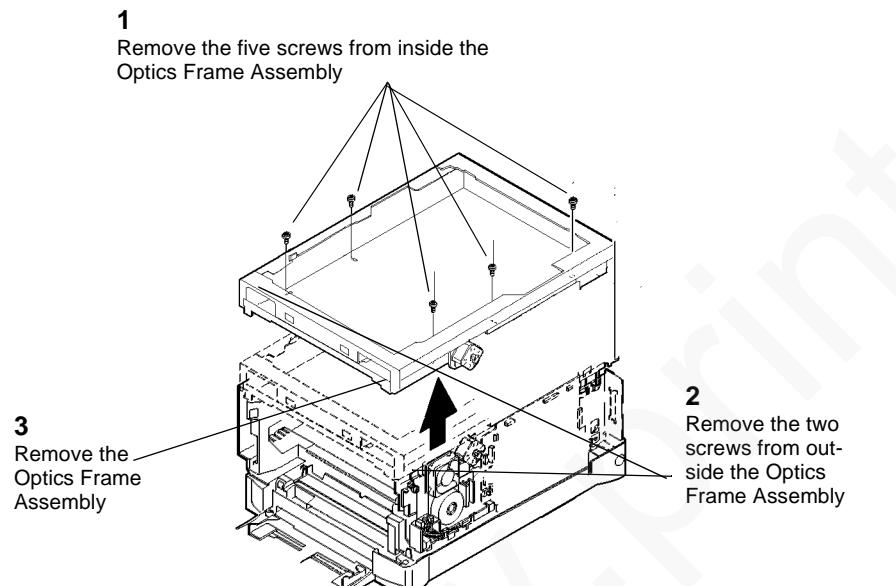
Parts List on PL 3.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Document Glass Assembly (REP 6.1)
 - f. Control Console (REP 14.5)
 - g. Main PWB (REP 1.1)
2. Remove the three screws from the upper portion of the PWB Mounting Bracket (PL 7.1).
3. (Figure 1): Remove the Optics Frame Assembly.



SKY028N

Figure 1 Removing the Optics Frame Assembly

REP 8.1 Paper Feed Solenoid (SOL1)

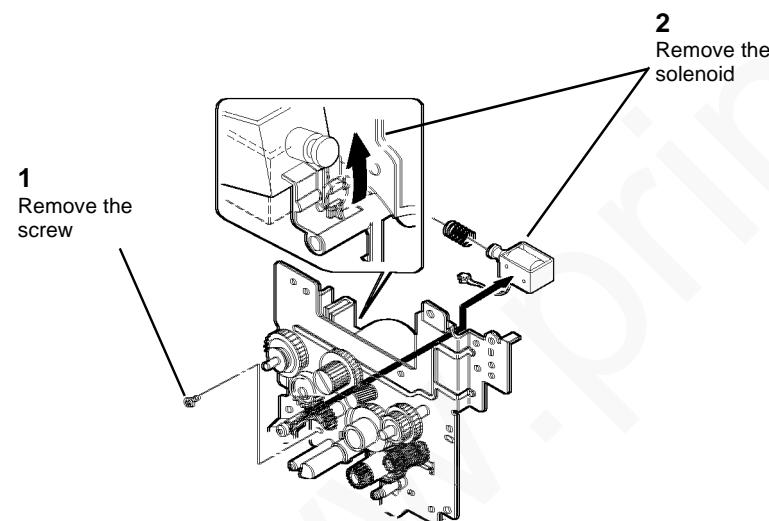
Parts List on PL 2.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Exit Roller (REP 8.9)
 - k. Manual Exit Drive Belt (REP 8.10)
 - l. Main Drive Assembly (REP 8.12)
2. (Figure 1): Remove the Paper Feed Solenoid.



SKY038Nb

Figure 1 Removing the Paper Feed Solenoid

REP 8.2 Registration Roll Solenoid (SOL3)

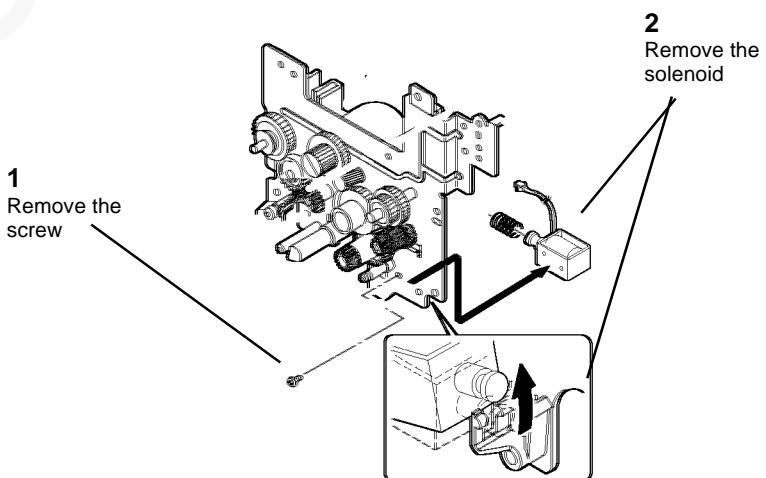
Parts List on PL 2.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Exit Roller (REP 8.9)
 - k. Manual Exit Drive Belt (REP 8.10)
 - l. Main Drive Assembly (REP 8.12)
2. (Figure 1): Remove the Registration Roll Solenoid.



SKY038NA

Figure 1 Removing the Registration Roll Solenoid

REP 8.3 Paper Feed Sensor (Q1)

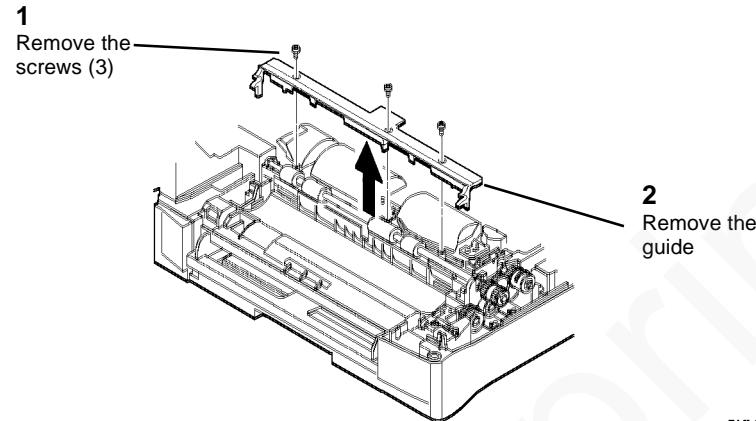
Parts List on PL 5.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

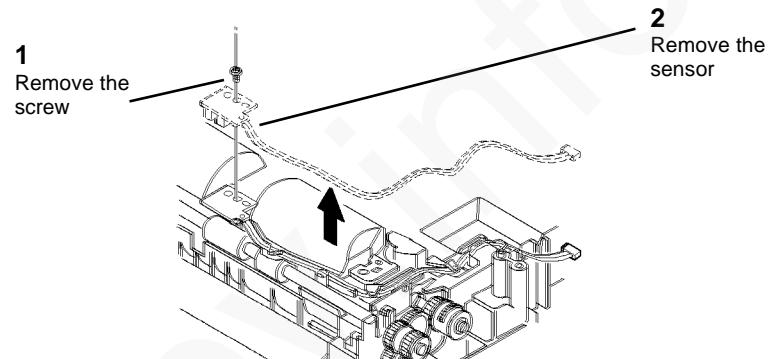
1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
2. (Figure 1): Remove the Upper Front Paper Guide.



SKY042N

Figure 1 Removing the Upper Front Paper Guide

3. (Figure 2): Remove the Paper Feed Sensor.



SKY043N

Figure 2 Removing the Paper Feed Sensor

REP 8.4 Bypass Feed Sensor (Q2) (XD100/XD102)

Parts List on PL 5.2

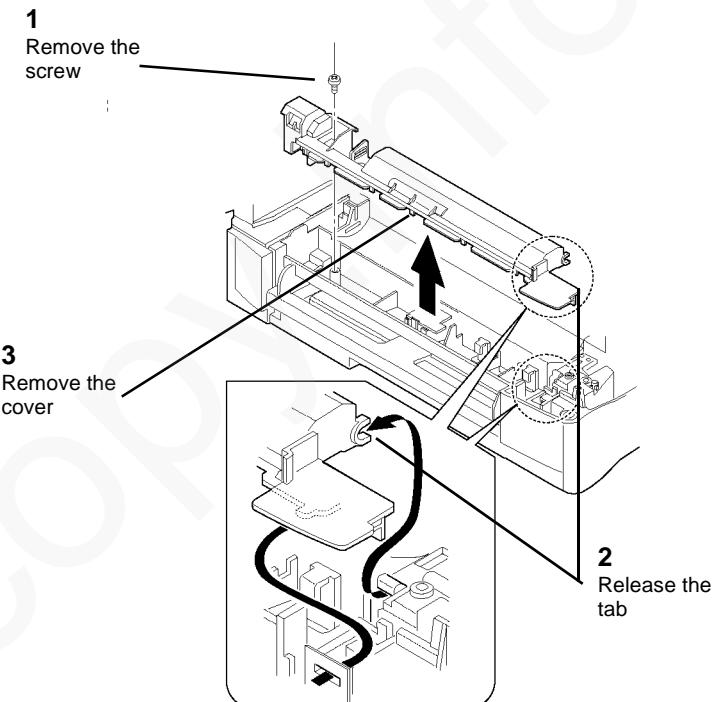
Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)

2. (Figure 1): Remove the Upper Cover.



SKY045N

Figure 1 Removing the Upper Cover

3. (Figure 2): Remove the Bypass Feed Sensor.

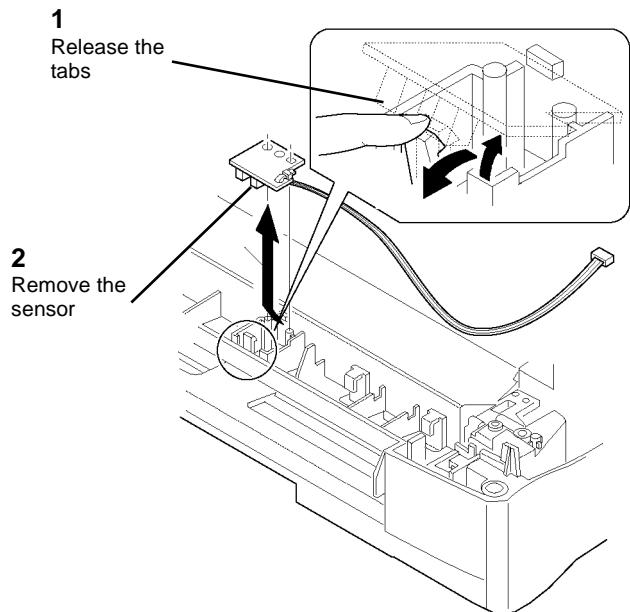


Figure 2 Removing the Bypass Feed Sensor

REP 8.5 Tray Detect Switch Harness

Parts List on PL 5.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
 - k. Main Drive Assembly (REP 8.12)

SKY048N

2. (Figure 1): Remove the Intermediate Frame Assembly.

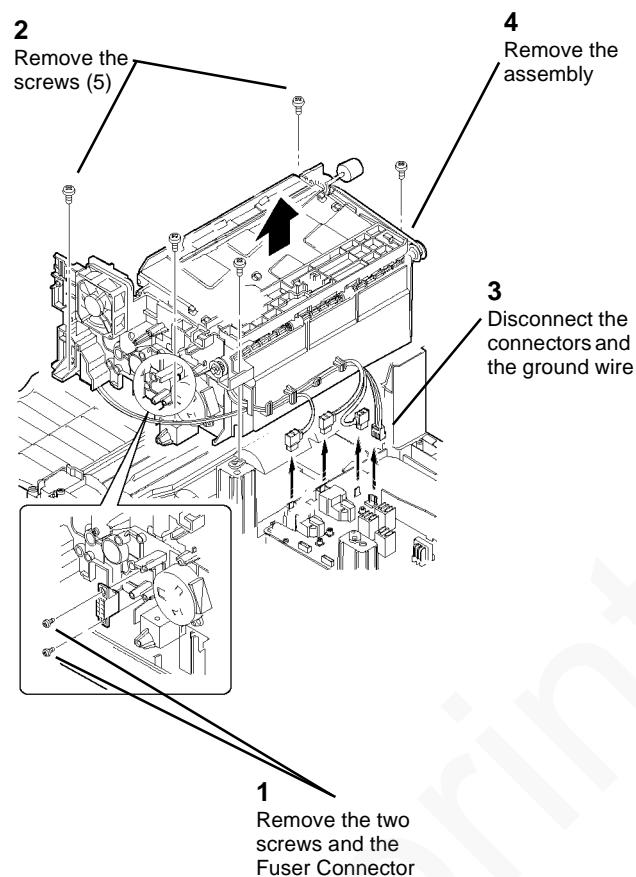


Figure 1 Removing the Intermediate Frame Assembly

3. (Figure 2): Remove the Upper Front Paper Guide.

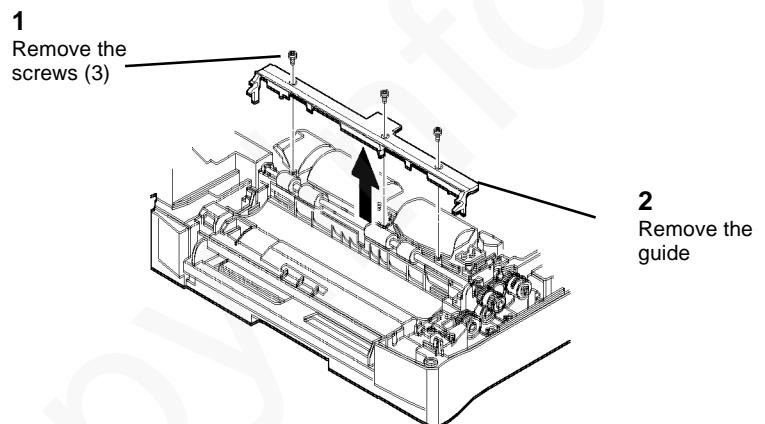


Figure 2 Removing the Upper Front Paper Guide

4. (Figure 3): Remove the Tray Detect Switch Harness.

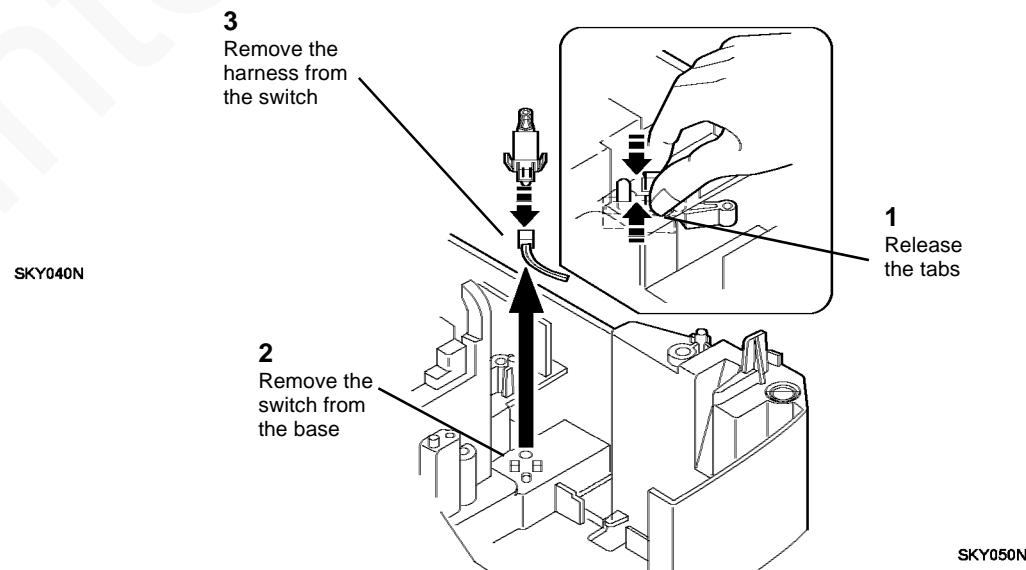


Figure 3 Removing the Tray Detect Switch Harness

REP 8.6 Paper Feed Roller

Parts List on PL 5.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Paper Tray.
2. (Figure 1): Remove the Paper Feed Roller.

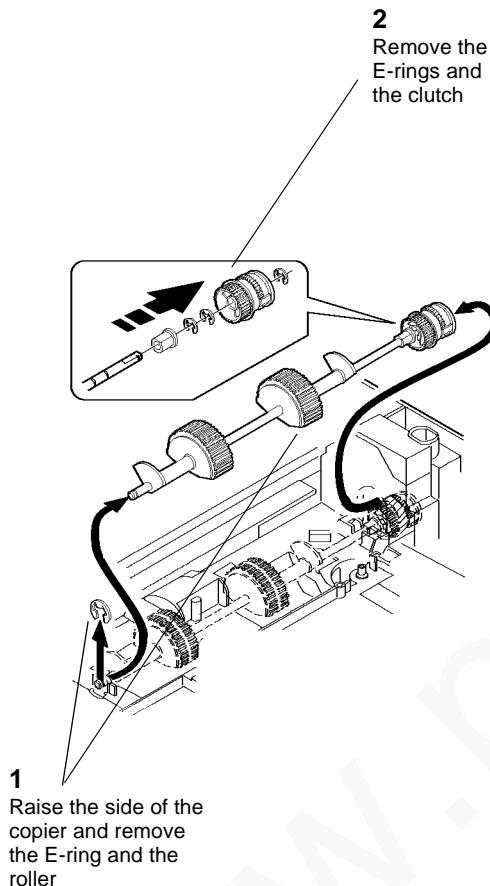


Figure 1 Removing the Paper Feed Roller

REP 8.7 Transport Roller (XD100/XD102)

Parts List on PL 5.2

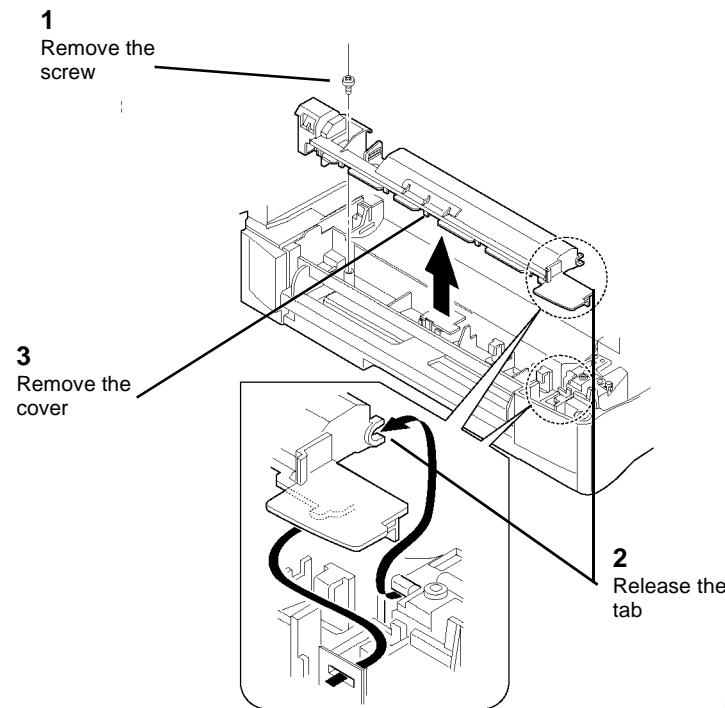
Removal

WARNING

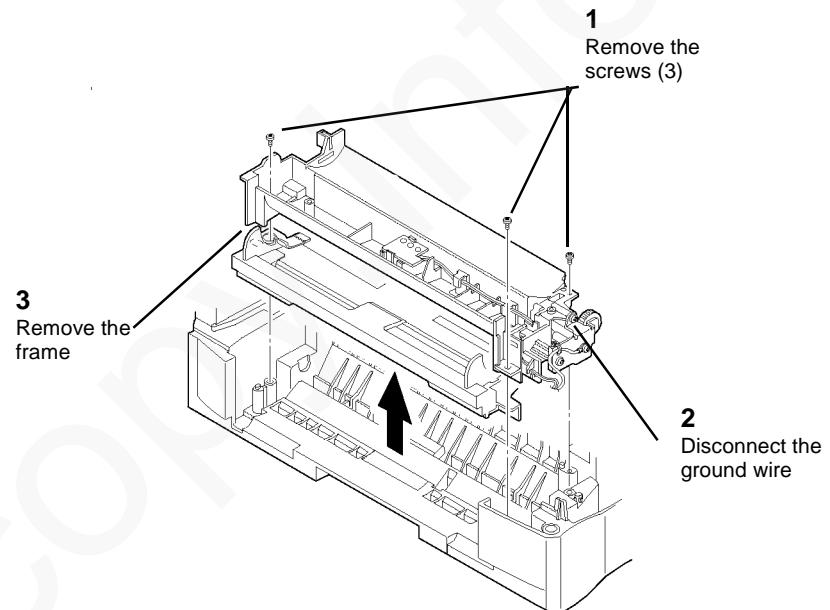
Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
 - k. Main Drive Assembly (REP 8.12)
 - l. Paper Feed Sensor (REP 8.3)

2. (Figure 1): Remove the Upper Cover.



3. (Figure 2): Remove the Bypass Frame.



SKY047N

Figure 2 Removing the Bypass Frame

SKY045N

Figure 1 Removing the Upper Cover

4. (Figure 3): Turn over the Bypass Frame and remove the Transport Roller.

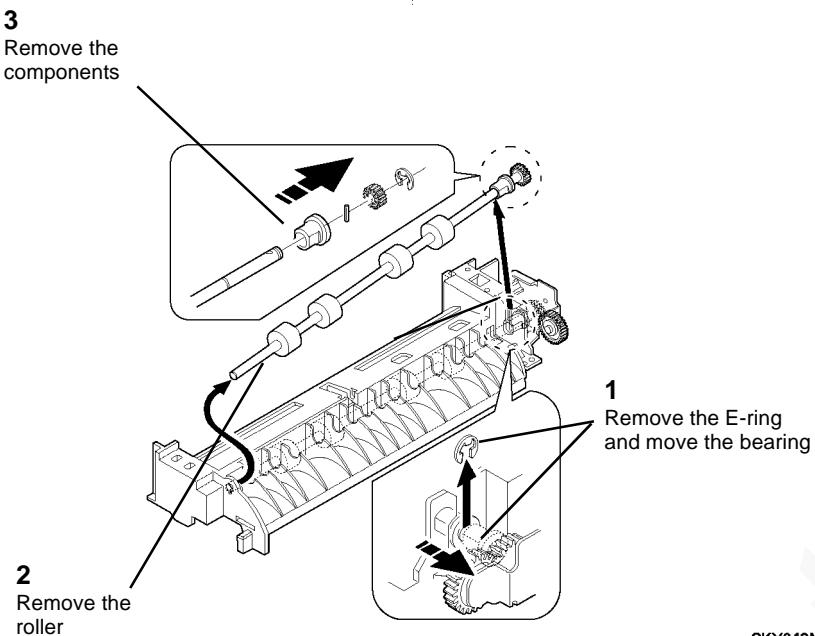


Figure 3 Removing the Transport Roller

REP 8.8 Side Door Interlock Switch (S3/S4)

Parts List on PL 5.3, PL 5.4

Removal

WARNING

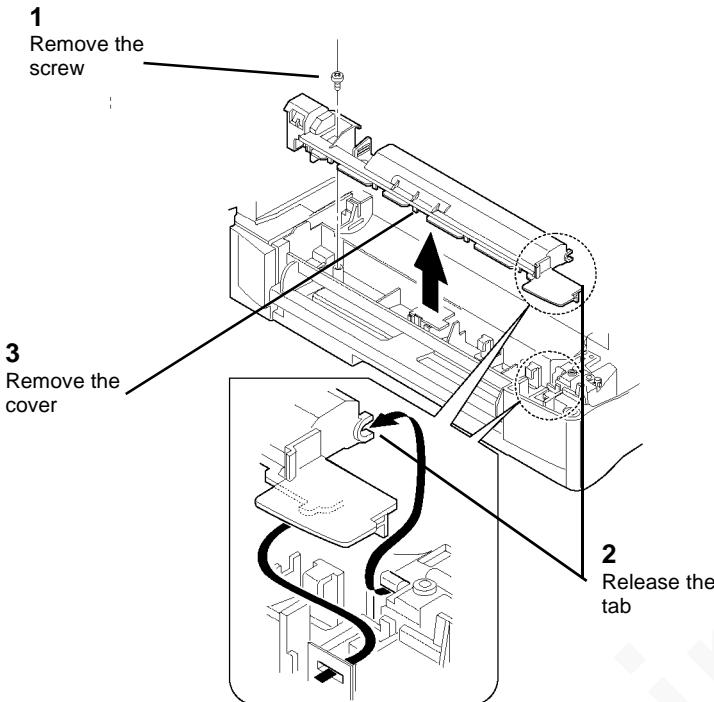
Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
 - k. Main Drive Assembly (REP 8.12)
 - l. Paper Feed Sensor (REP 8.3)

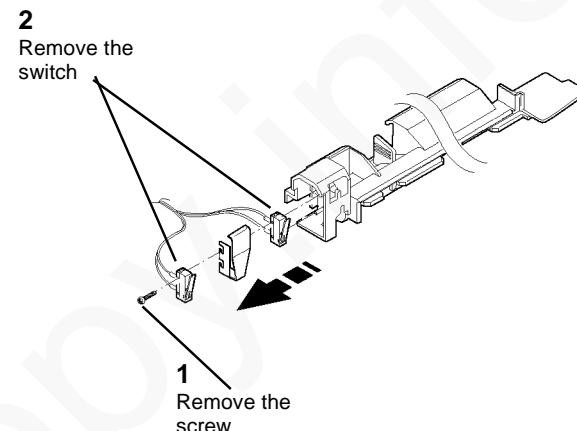
SKY049N

NOTE: Although the Upper Covers on the XD100 and the XD102 are not identical to the Upper Cover on the XD104, this procedure may be used to remove the similar components.

2. (Figure 1): Remove the Upper Cover.



3. (Figure 2): Remove the Side Door Interlock Switch.



SKY046N

Figure 2 Removing the Side Door Interlock Switch

SKY045N

Figure 1 Removing the Upper Cover

REP 8.9 Exit Roller

Parts List on PL 2.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Document Glass Assembly (REP 6.1)
 - f. Control Console (REP 14.5)
 - g. Main PWB (REP 1.1)
 - h. Optics Frame Assembly (REP 6.6)
2. (Figure 1): Open the Exit Guide.

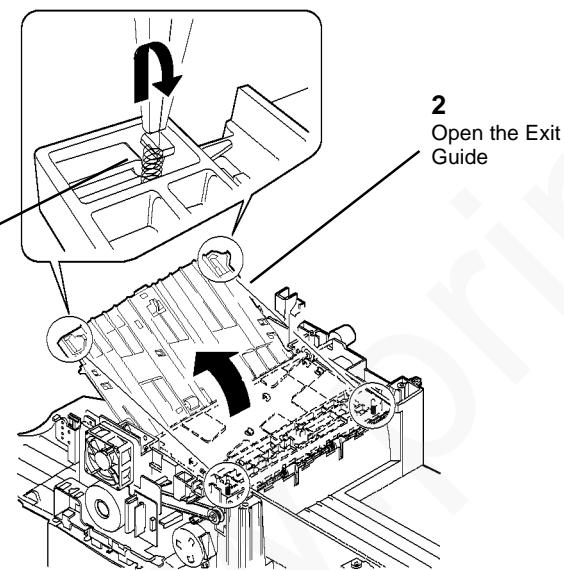


Figure 1 Opening the Exit Guide

3. (Figure 2): Remove the Exit Roller.

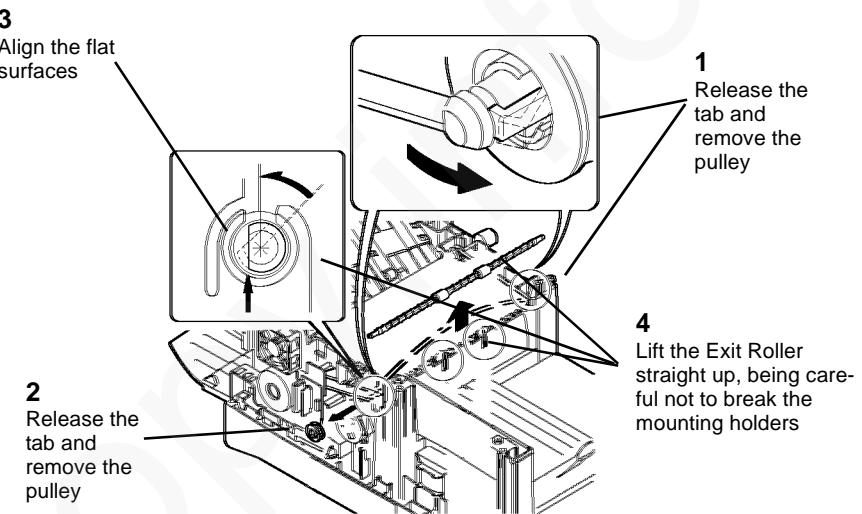


Figure 2 Removing the Exit Roller

REP 8.10 Manual Exit Drive Belt

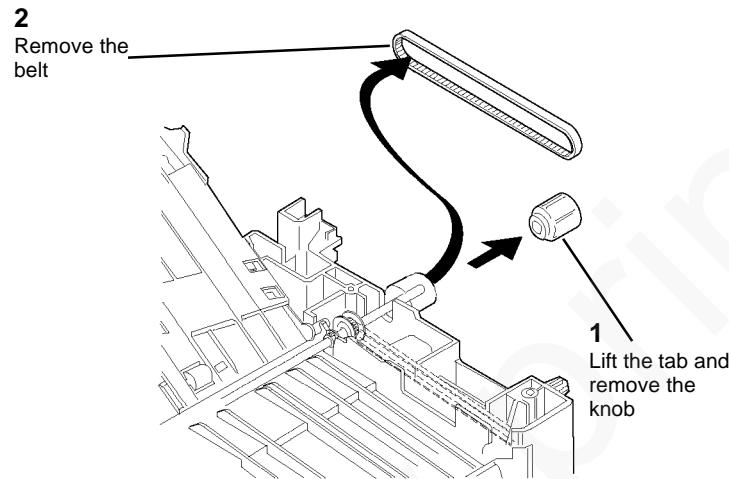
Parts List on PL 2.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Document Glass Assembly (REP 6.1)
 - f. Control Console (REP 14.5)
 - g. Main PWB (REP 1.1)
 - h. Optics Frame Assembly (REP 6.6)
 - i. Exit Roller (REP 8.9)
2. (Figure 1): Remove the Manual Exit Drive Belt.



SKY033N

Figure 1 Removing the Manual Exit Drive Belt

REP 8.11 Lower Transport Roller

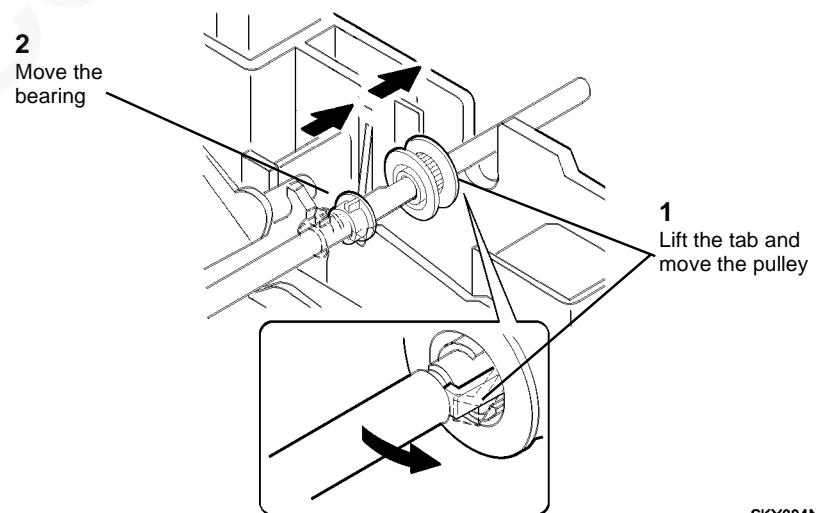
Parts List on PL 2.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

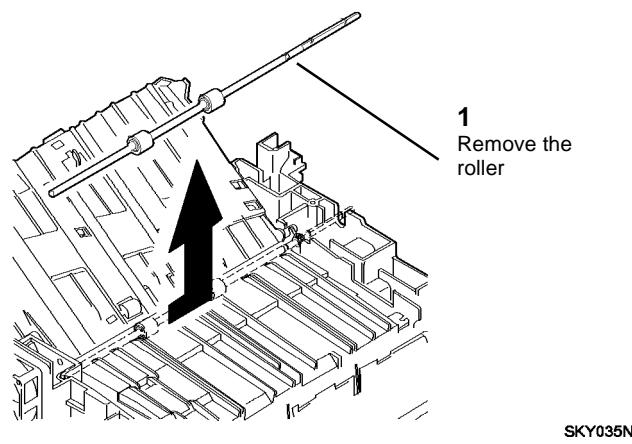
1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Document Glass Assembly (REP 6.1)
 - f. Control Console (REP 14.5)
 - g. Main PWB (REP 1.1)
 - h. Optics Frame Assembly (REP 6.6)
 - i. Exit Roller (REP 8.9)
 - j. Manual Exit Drive Belt (REP 8.10)
2. (Figure 1): Prepare to remove the roller.



SKY034N

Figure 1 Preparing to Remove the Roller

3. (Figure 2): Remove the Lower Transport Roller.



SKY035N

Figure 2 Removing the Lower Transport Roller

REP 8.12 Main Drive Assembly

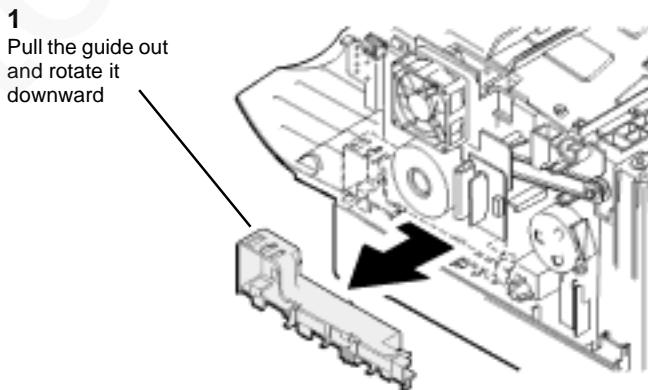
Parts List on PL 2.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Exit Roller (REP 8.9)
 - k. Manual Exit Drive Belt (REP 8.10)
2. (Figure 1): Remove the Harness Guide.



SKY036N

Figure 1 Removing the Harness Guide

3. (Figure 2): Remove the Main Drive Assembly and the Exit Drive Belt.

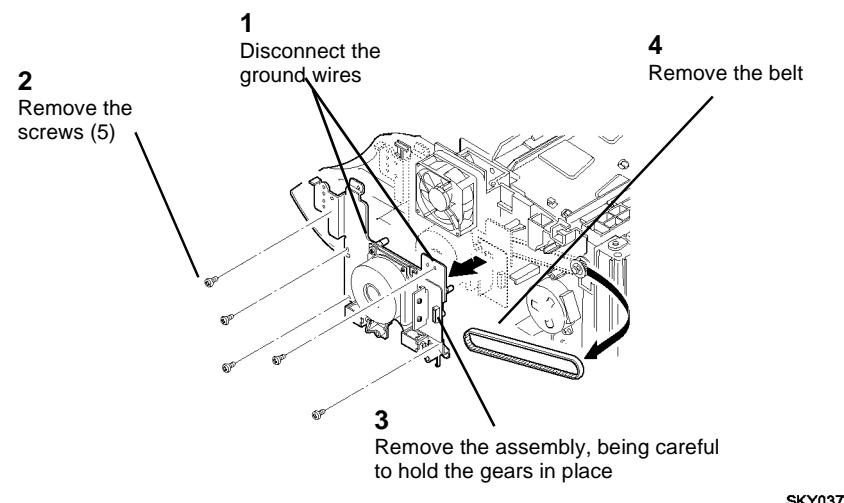


Figure 2 Removing the Main Drive Assembly

REP 8.13 Lower Registration Roller

Parts List on PL 5.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
 - k. Main Drive Assembly (REP 8.12)

2. (Figure 1): Remove the Intermediate Frame Assembly.

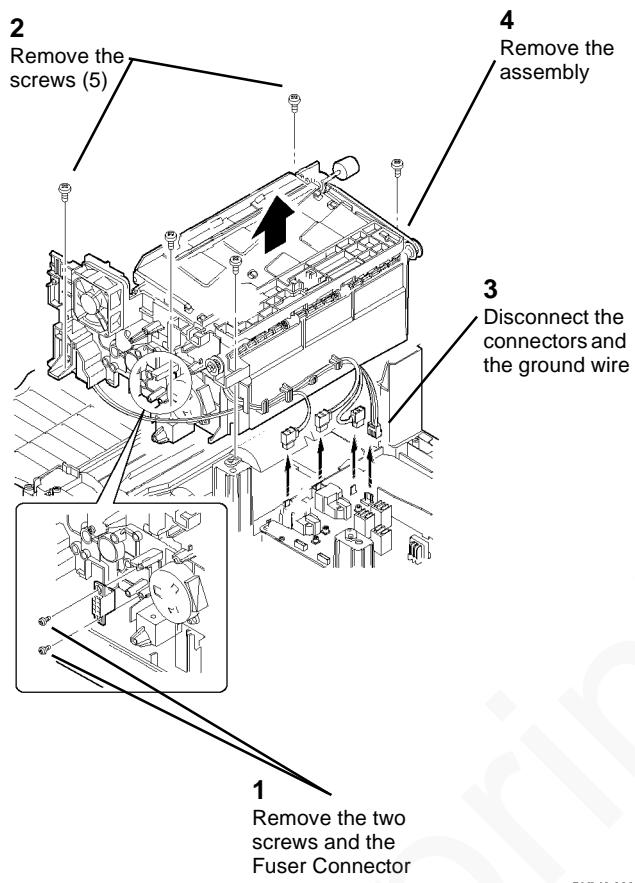


Figure 1 Removing the Intermediate Frame Assembly

3. (Figure 2): Remove the Upper Front Paper Guide.

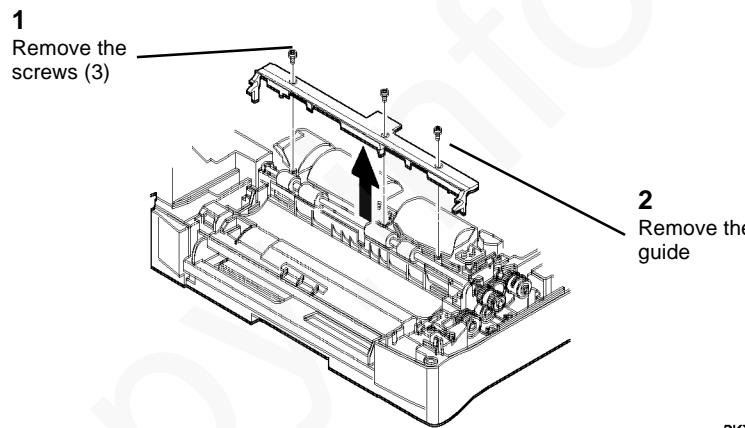


Figure 2 Removing the Upper Front Paper Guide

4. (Figure 3): Remove the Lower Registration Roller.

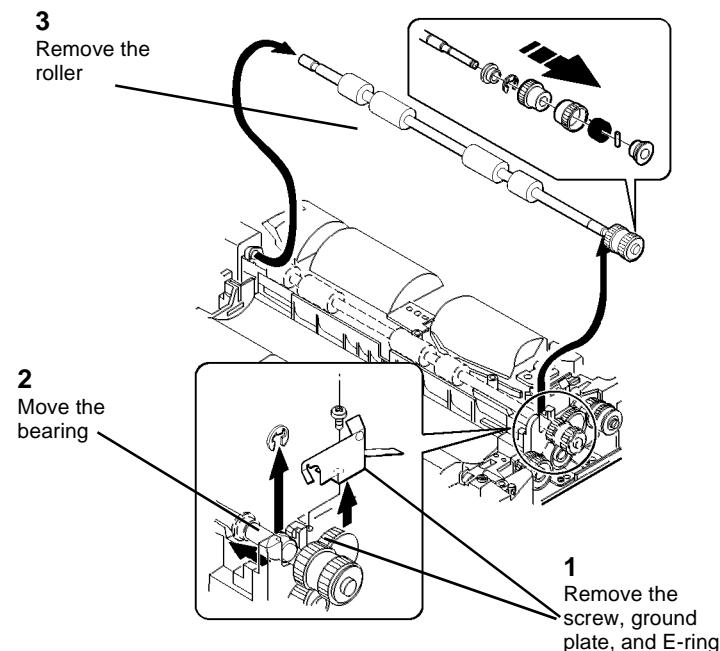


Figure 3 Removing the Lower Registration Roller

REP 8.14 Tray Detect Switch (S2)

Parts List on PL 5.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
 - k. Main Drive Assembly (REP 8.12)

SKY041N

2. (Figure 1): Remove the Intermediate Frame Assembly.

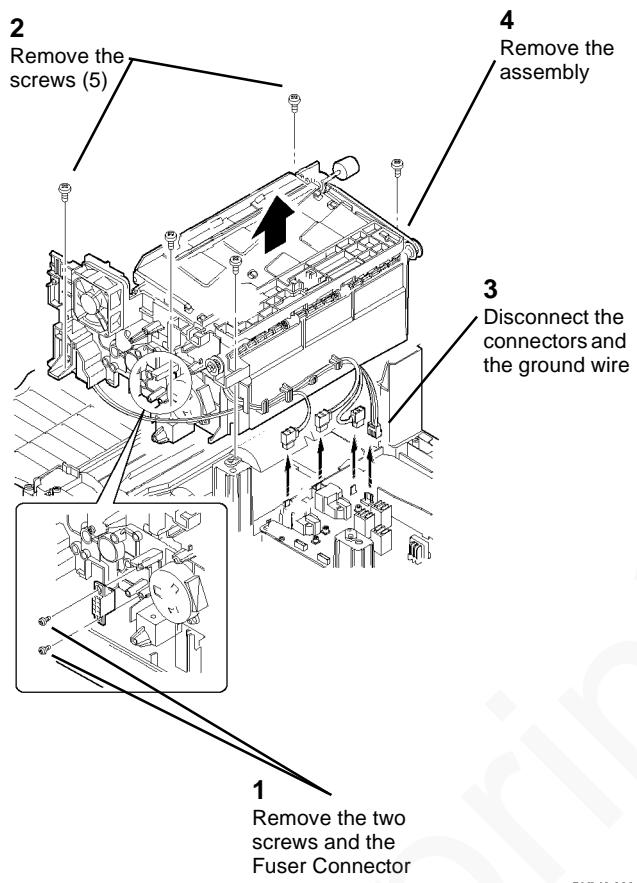


Figure 1 Removing the Intermediate Frame Assembly

3. (Figure 2): Remove the Upper Front Paper Guide.

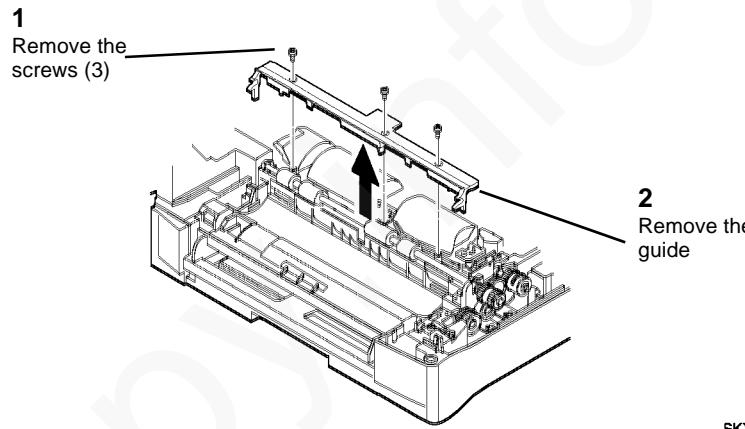


Figure 2 Removing the Upper Front Paper Guide

4. (Figure 3): Remove the Tray Detect Switch.

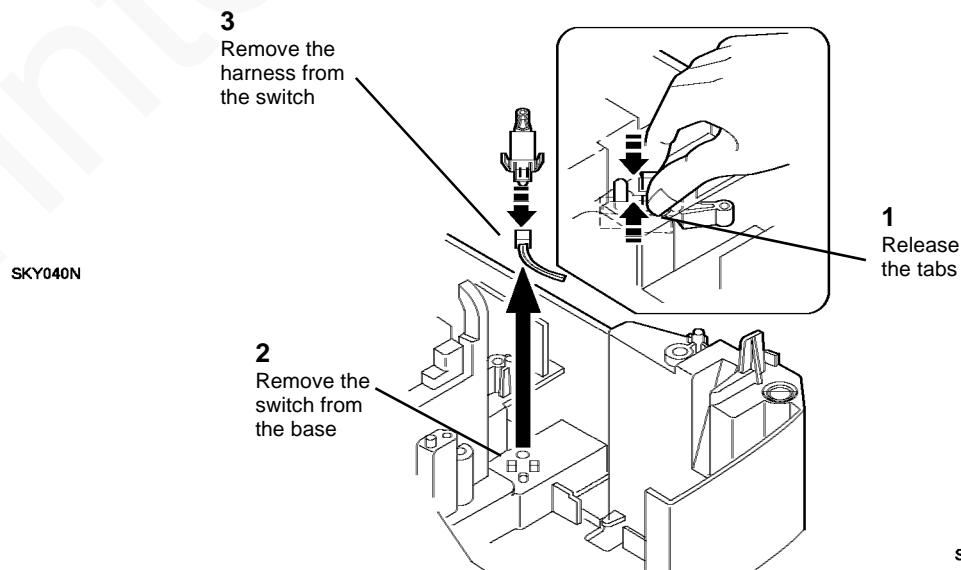


Figure 3 Removing the Tray Detect Switch

REP 8.15 Feed Roll (XD104)

Parts List on PL 5.5

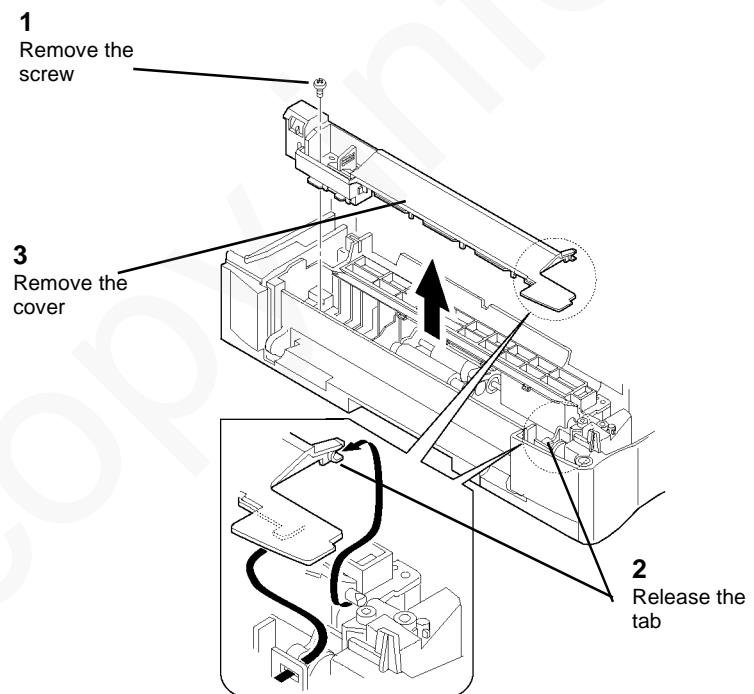
Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
 - k. Main Drive Assembly (REP 8.12)
 - l. Paper Feed Sensor (REP 8.3)

2. (Figure 1): Remove the Upper Cover.



SKY052N

Figure 1 Removing the Upper Cover

3. (Figure 2): Remove the Bypass Frame.

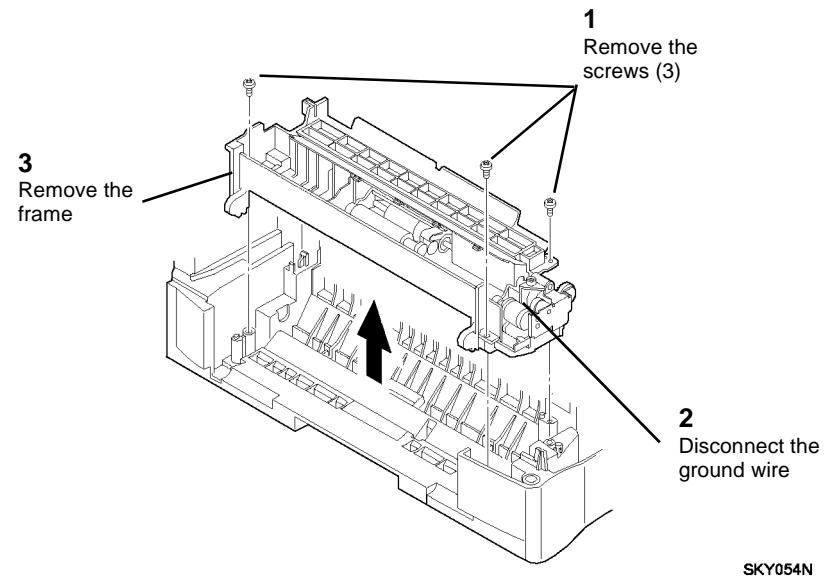


Figure 2 Removing the Bypass Frame

4. (Figure 3): Remove the Feed Roll and Shaft Assembly

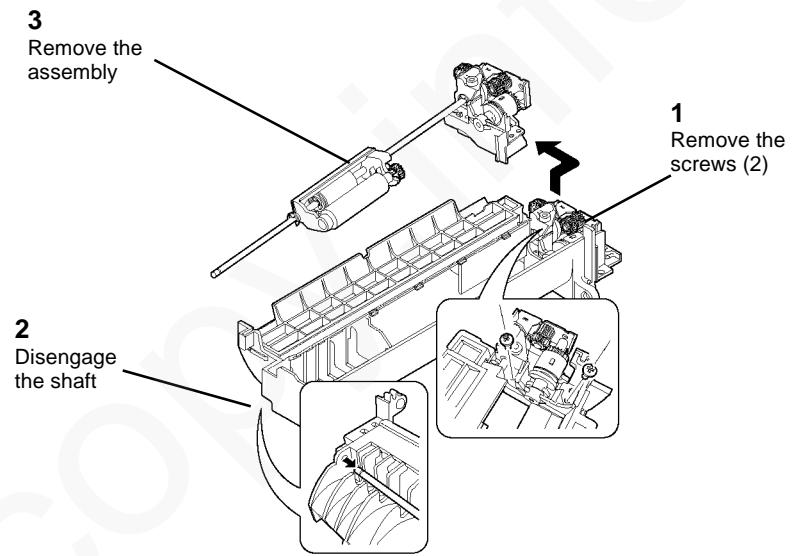
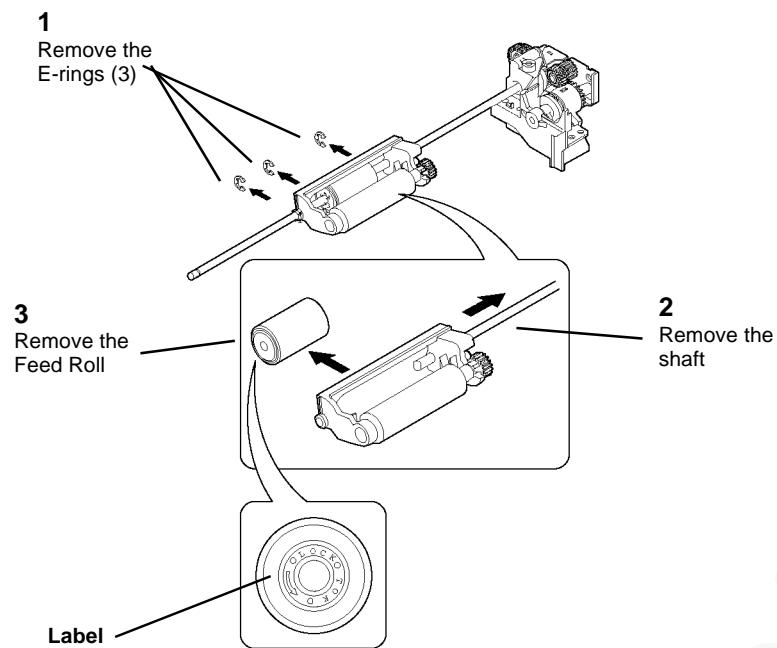


Figure 3 Removing the Feed Roll and Shaft Assembly

5. (Figure 4): Remove the Feed Roll.



REP 8.16 Retard Roll (XD104)

Parts List on PL 5.5

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
 - k. Main Drive Assembly (REP 8.12)
 - l. Paper Feed Sensor (REP 8.3)

SKY056N

Figure 4 Removing the Feed Roll

Replacement

1. Reinstall the Feed Roller with the label oriented as shown in (Figure 4).

2. (Figure 1): Remove the Upper Cover.

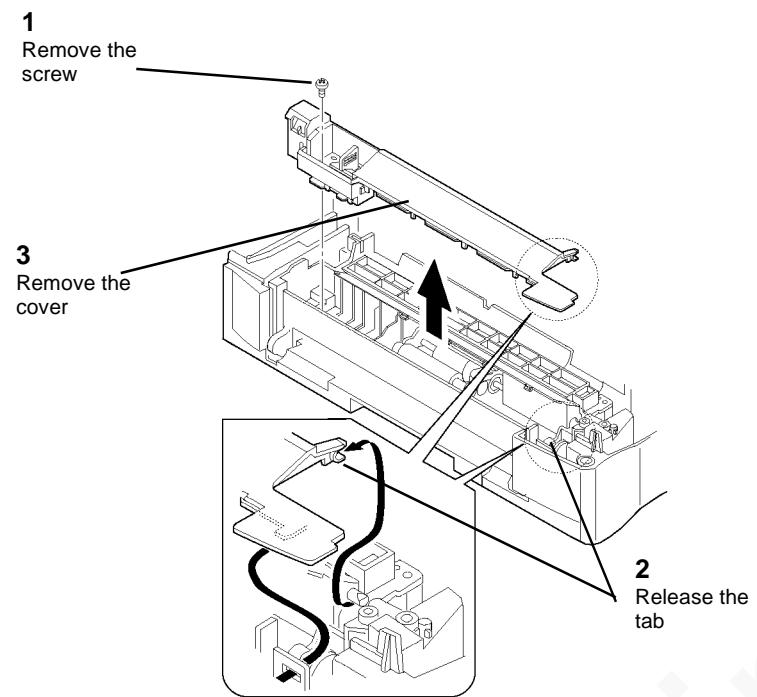


Figure 1 Removing the Upper Cover

3. (Figure 2): Remove the Bypass Frame.

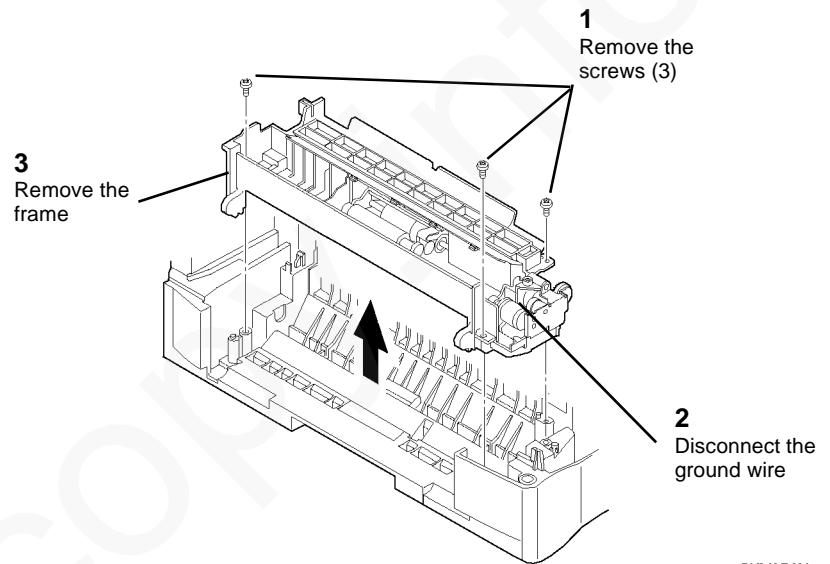
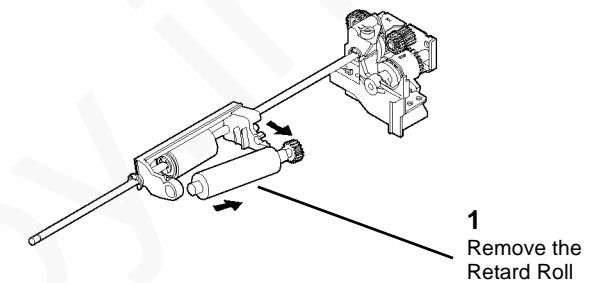
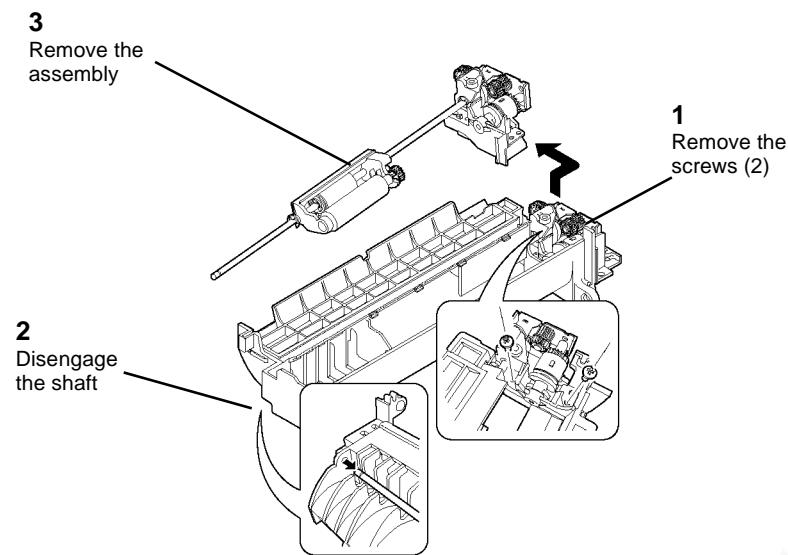


Figure 2 Removing the Bypass Frame

4. (Figure 3): Remove the Feed Roll and Shaft Assembly

5. (Figure 4): Remove the Retard Roll.



SKY057N

Figure 4 Removing the Retard Roll

SKY055N

Figure 3 Removing the Feed Roll and Shaft Assembly

REP 8.17 Feed Solenoid (XD104)

Parts List on PL 5.5

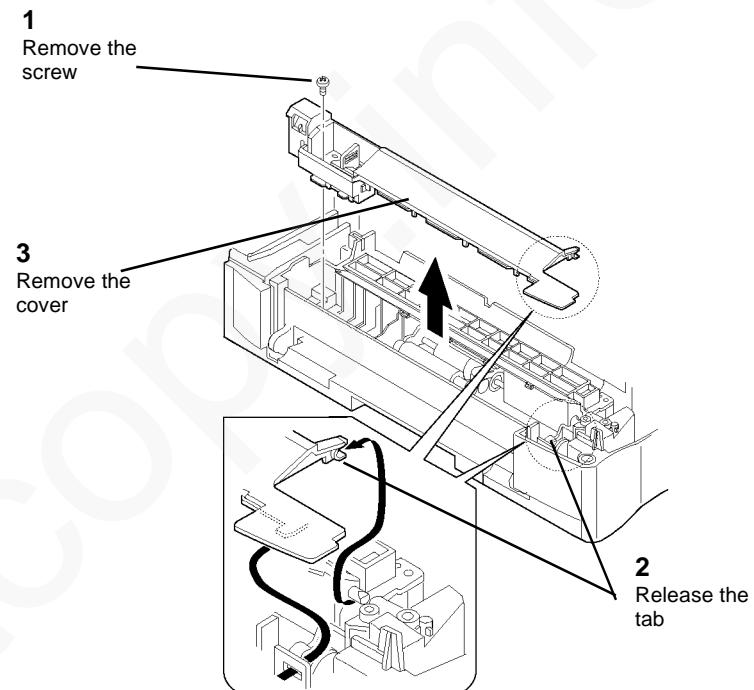
Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Side Door
 - f. Document Glass Assembly (REP 6.1)
 - g. Control Console (REP 14.5)
 - h. Main PWB (REP 1.1)
 - i. Optics Frame Assembly (REP 6.6)
 - j. Laser Module (REP 6.4)
 - k. Main Drive Assembly (REP 8.12)
 - l. Paper Feed Sensor (REP 8.3)

2. (Figure 1): Remove the Upper Cover.



SKY052N

Figure 1 Removing the Upper Cover

3. (Figure 2): Remove the Bypass Frame.

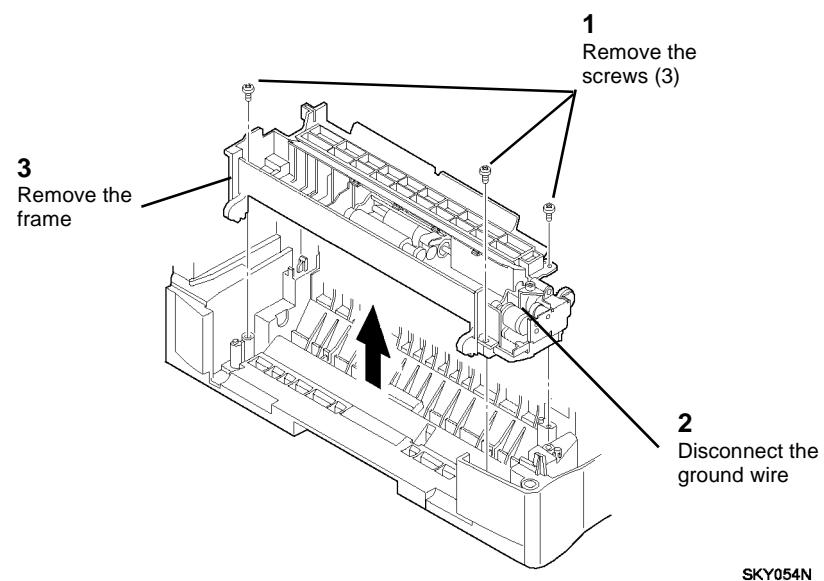


Figure 2 Removing the Bypass Frame

4. (Figure 3): Remove the Feed Roll and Shaft Assembly

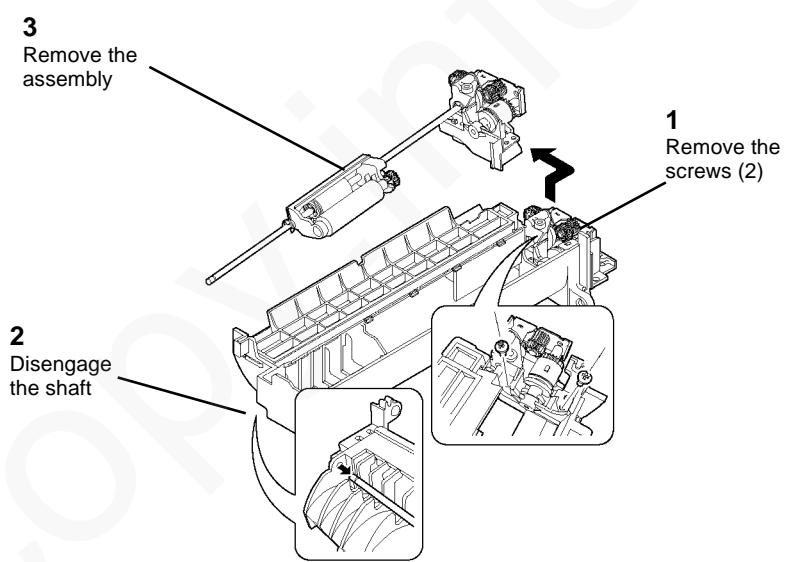


Figure 3 Removing the Feed Roll and Shaft Assembly

5. (Figure 4): Remove the Feed Solenoid.

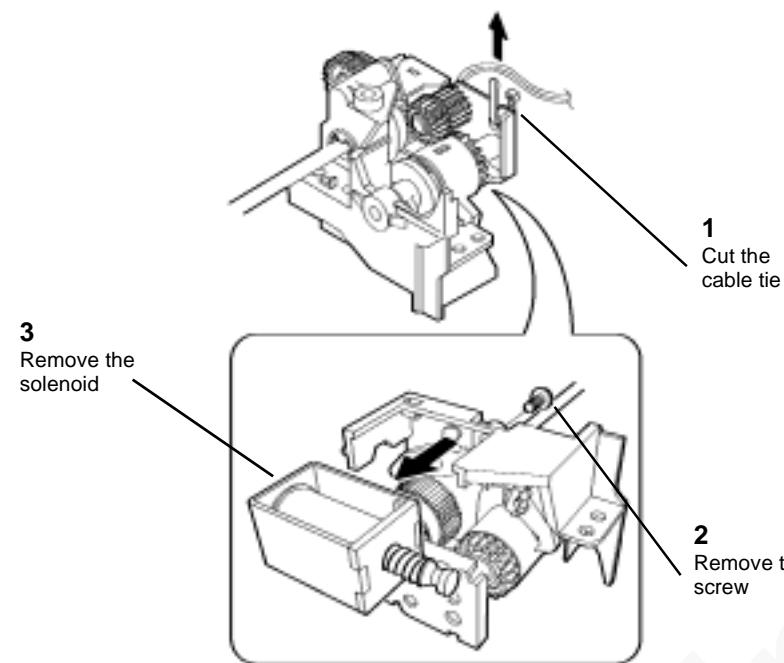


Figure 4 Removing the Feed Solenoid

REP 8.20 Tray 2 Paper Feed Sensor (Q7)

Parts List on PL 5.8

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

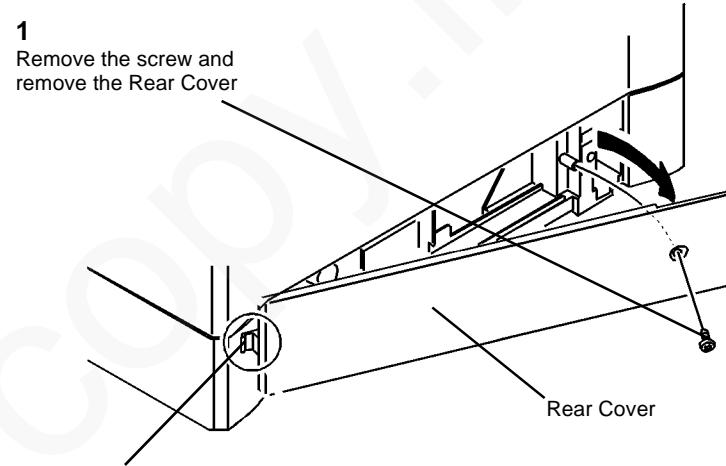


Figure 1 Removing the Rear Cover

2. (Figure 2): Remove the Tray 2 Drive Assembly.

3. (Figure 3): Remove the Tray 2 Paper Feed Sensor (Q7).

NOTE: When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts

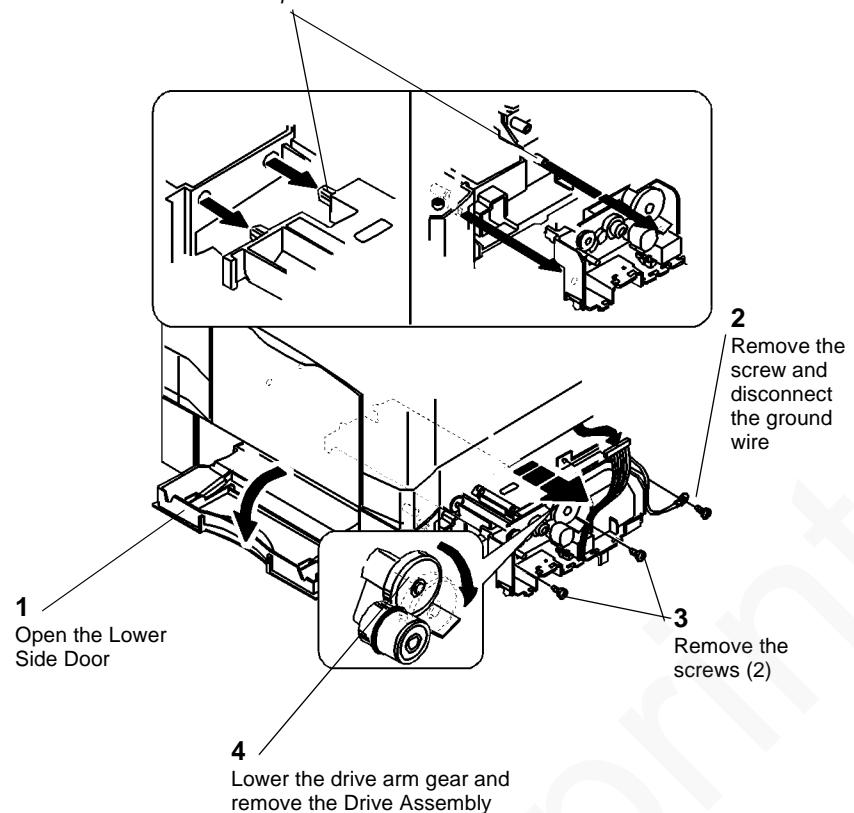


Figure 2 Removing the Drive Assembly

0500017A-SKY

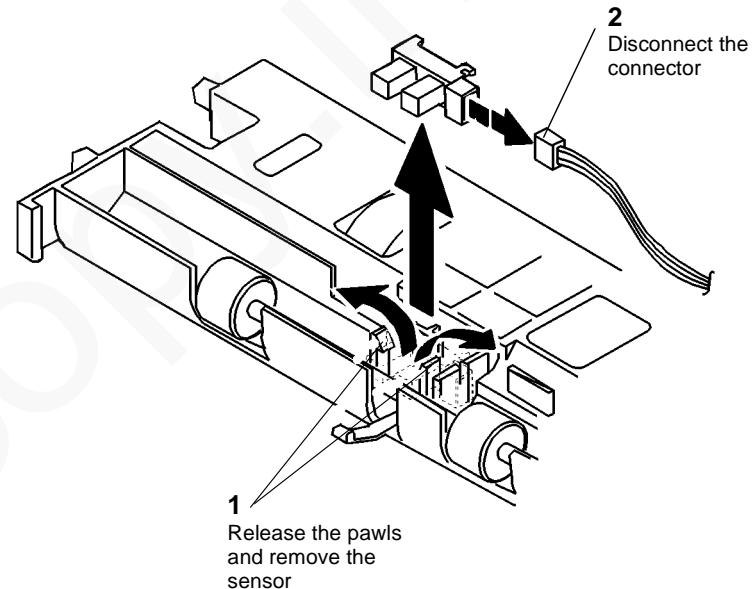


Figure 3 Removing the Paper Feed Sensor (Q7)

0500018A-SKY

REP 8.21 Tray 2 Detect Switch (S5)

Parts List on PL 5.8

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

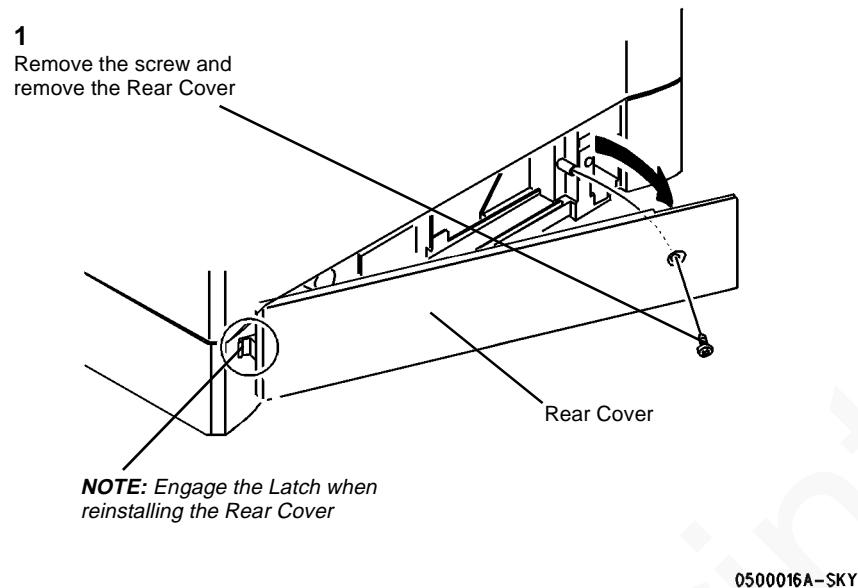


Figure 1 Removing the Rear Cover

2. (Figure 2): Remove the Tray 2 Drive Assembly.

NOTE: When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts

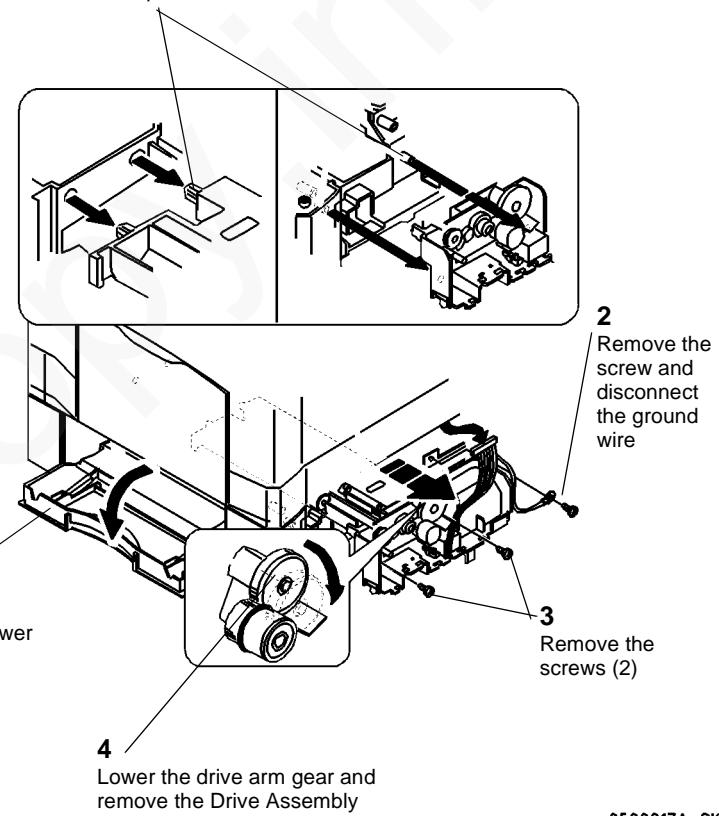


Figure 2 Removing the Drive Assembly

3. (Figure 3): Remove the Detect Switch (S5).

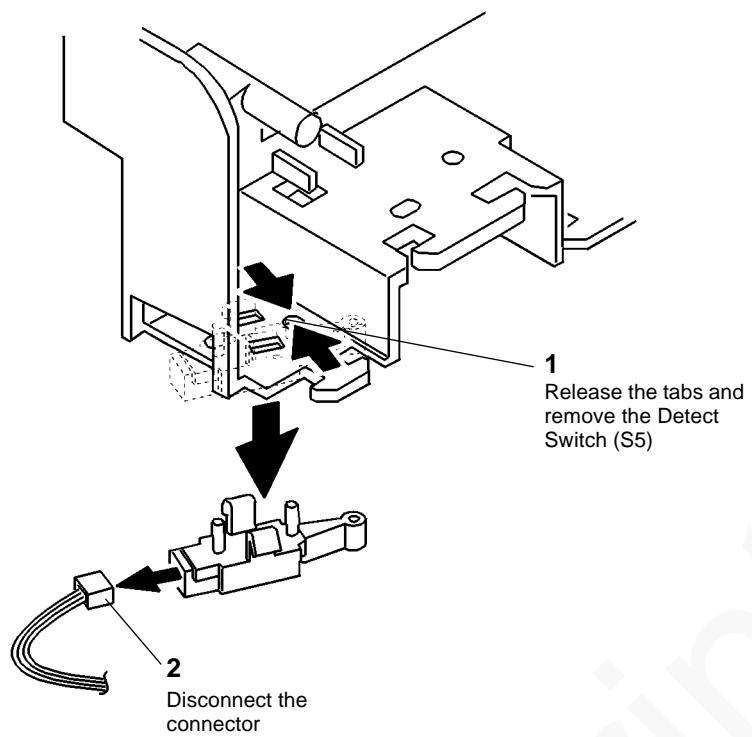


Figure 3 Removing the Detect Switch (S5)

REP 8.22 Tray 2 Paper Feed Solenoid (SOL2)

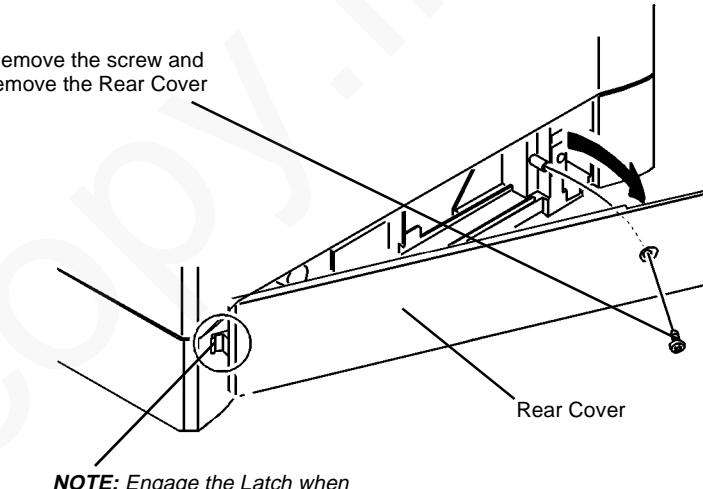
Parts List on PL 5.8

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.



0500016A-SKY

Figure 1 Removing the Rear Cover

0500019A-SKY

2. (Figure 2): Remove the Tray 2 Drive Assembly.

NOTE: When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts

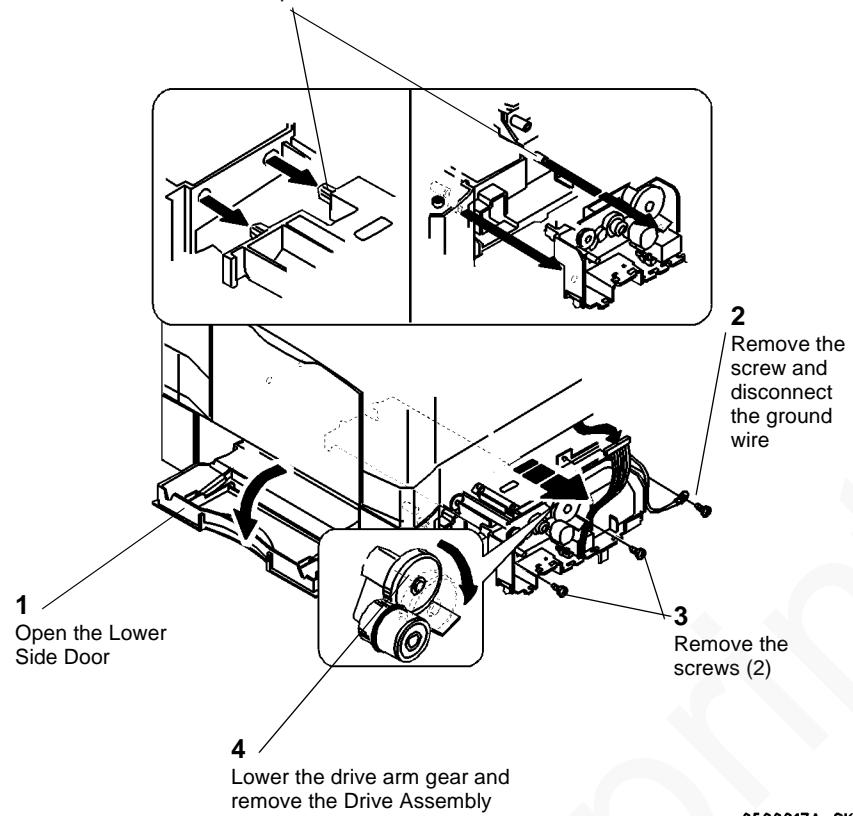
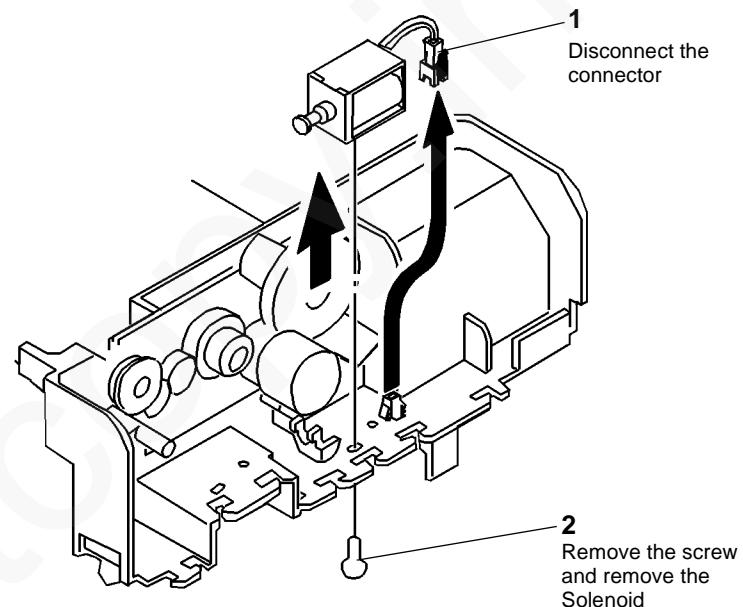


Figure 2 Removing the Drive Assembly

3. (Figure 3): Remove the Paper Feed Solenoid (SOL2).



0500020A-SKY

Figure 3 Removing the Paper Feed Solenoid (SOL2)

REP 8.23 Tray 2 Transport Roller

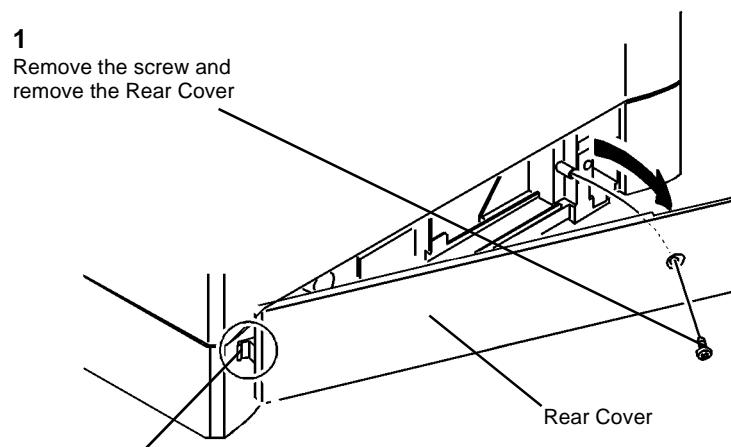
Parts List on PL 5.8

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

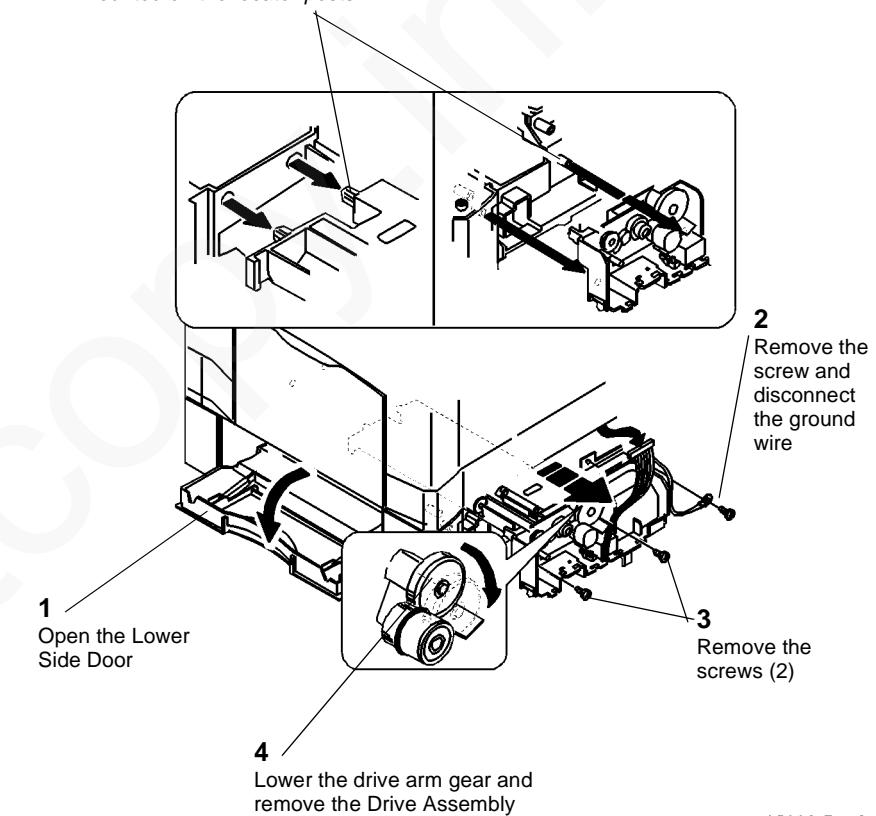


0500016A-SKY

Figure 1 Removing the Rear Cover

2. (Figure 2): Remove the Tray 2 Drive Assembly.

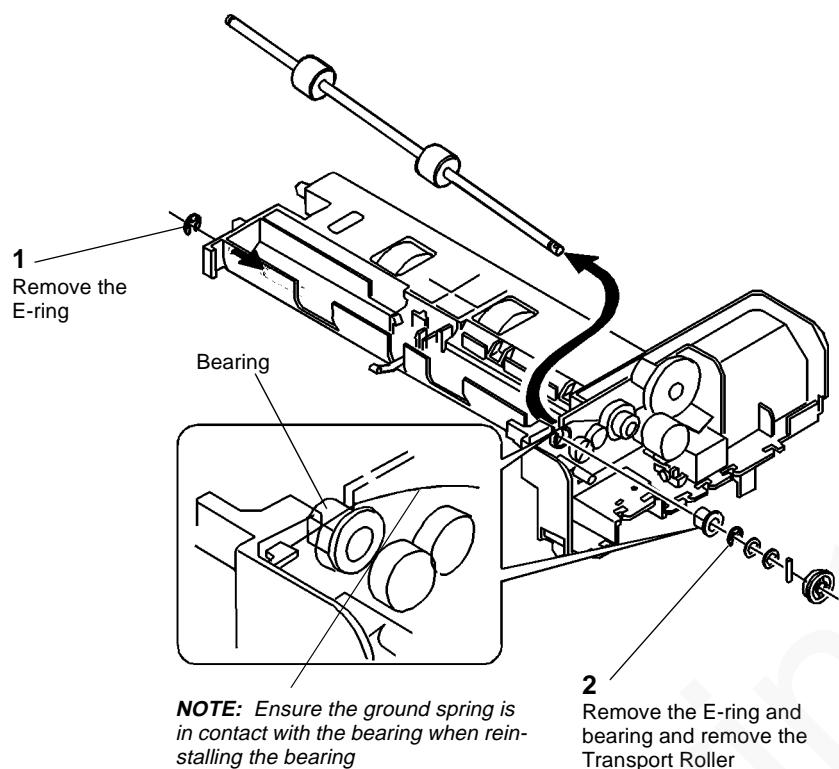
NOTE: When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts



0500017A-SKY

Figure 2 Removing the Drive Assembly

3. (Figure 3): Remove the Transport Roller.



0500021A-SKY

Figure 3 Removing the Transport Roller

REP 8.24 Tray 2 Paper Feed Clutch

Parts List on PL 5.8

Removal

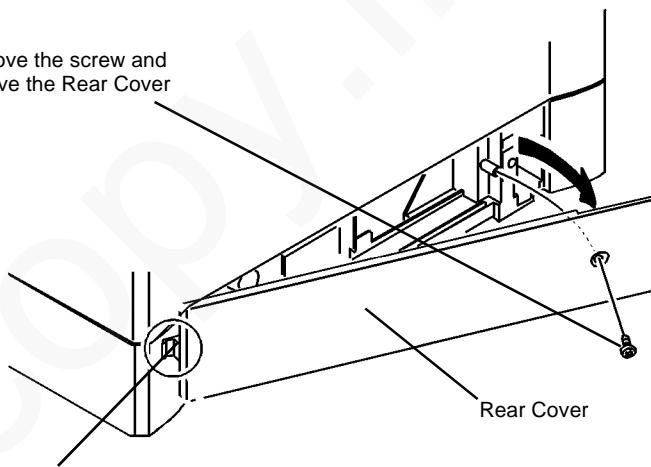
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. (Figure 1): Remove the Rear Cover.

1

Remove the screw and
remove the Rear Cover



0500016A-SKY

Figure 1 Removing the Rear Cover

2. (Figure 2): Remove the Tray 2 Drive Assembly.

NOTE: When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts

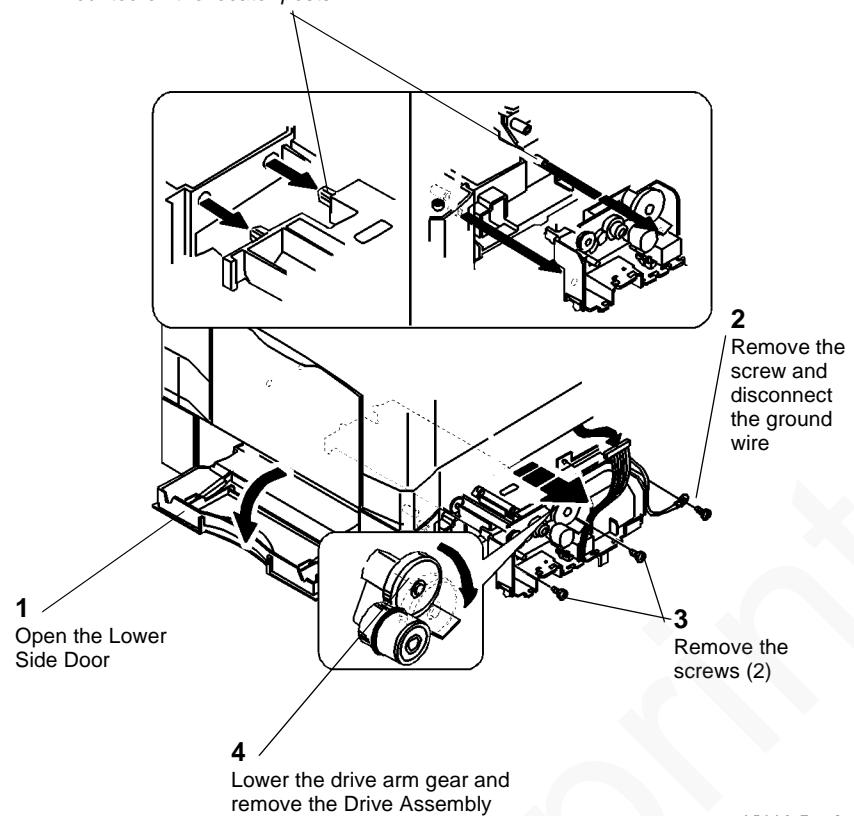


Figure 2 Removing the Drive Assembly

3. (Figure 3): Remove the Paper Feed Clutch.

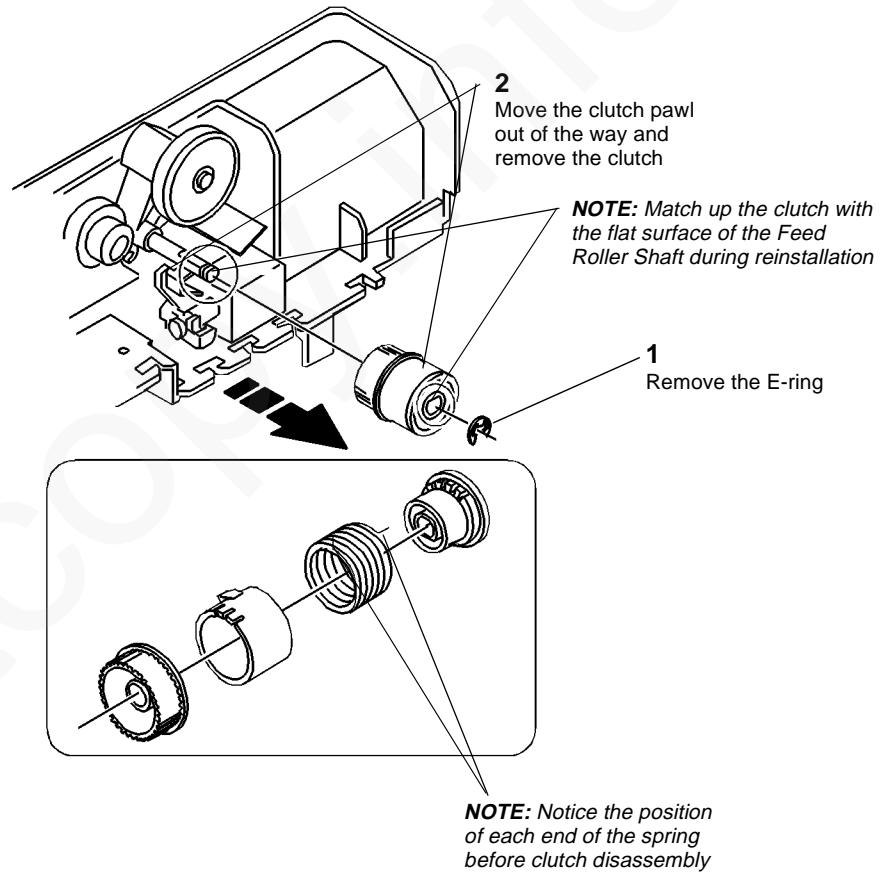


Figure 3 Removing the Paper Feed Clutch

REP 8.25 Tray 2 Feed Roller

Parts List on PL 5.8

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

- (Figure 1): Remove the Rear Cover.

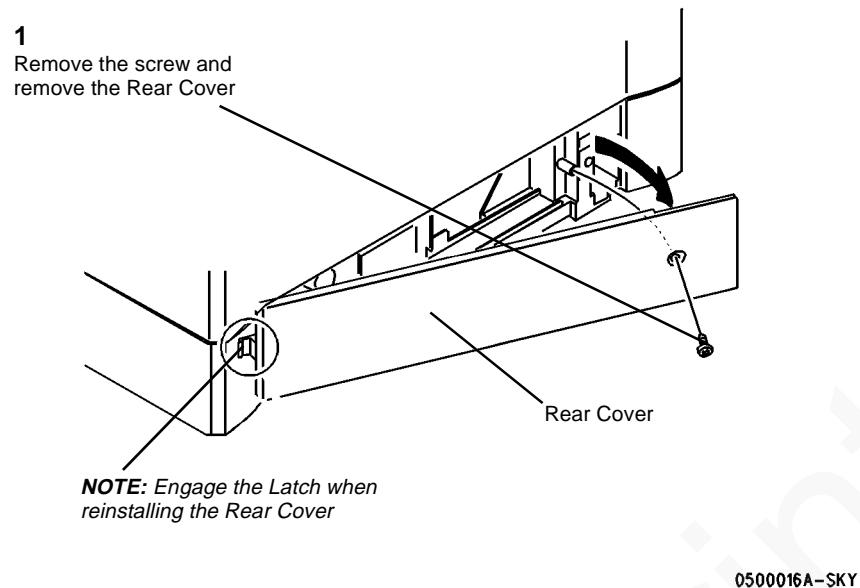


Figure 1 Removing the Rear Cover

- (Figure 2): Remove the Tray 2 Drive Assembly.

NOTE: When reinstalling Tray 2 Drive Assembly, make sure it is mounted on the locator posts

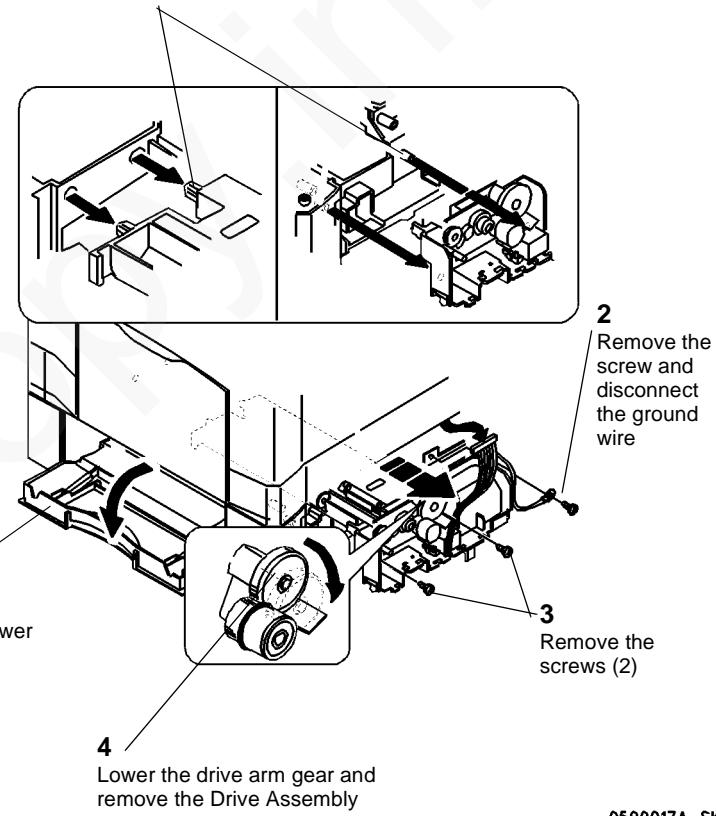
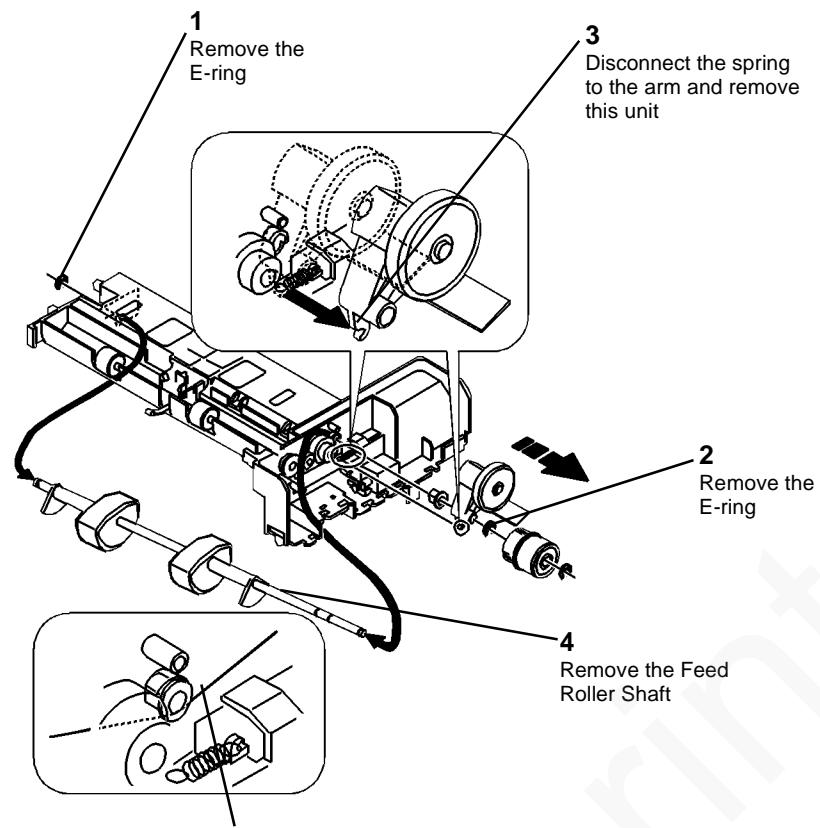


Figure 2 Removing the Drive Assembly

3. Remove the Tray 2 Clutch (REP 8.24).
4. (Figure 3): Remove the Tray 2 Feed Roller.



0500023A-SKY

Figure 3 Removing the Feed Roller

Notes:

REP 9.1 Toner Motor (MOT4)

Parts List on PL 2.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Main PWB (REP 1.1).
4. (Figure 1): Remove the Toner Motor.

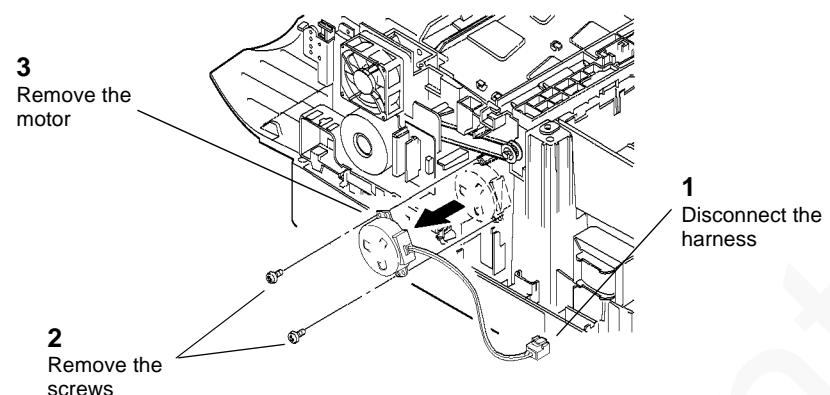


Figure 1 Removing the Toner Motor

SKY030N

REP 9.2 Transfer/Detack Corotron Assembly

Parts List on PL 1.4, PL 7.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Open the Side Door.
2. (Figure 1): Remove the Transfer/Detack Corotron Assembly.

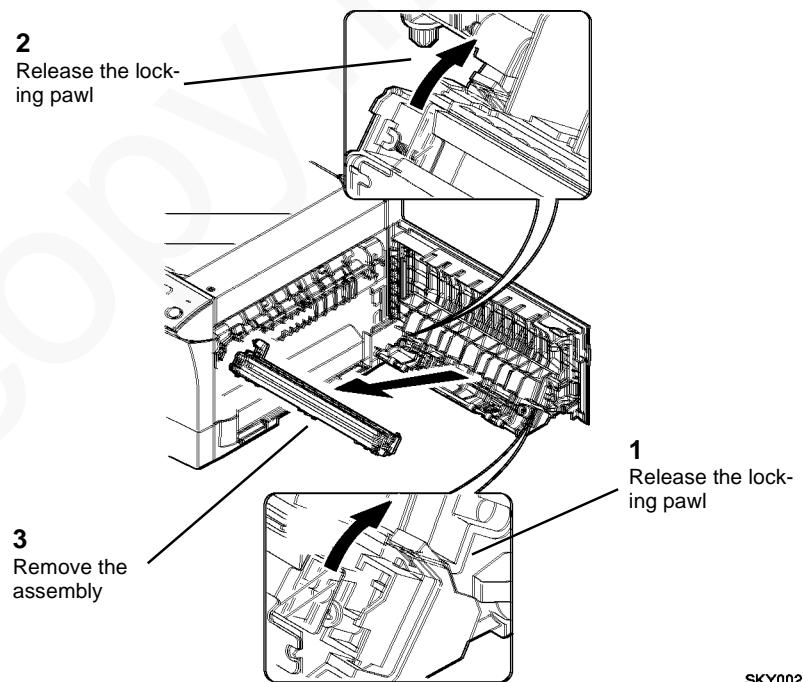


Figure 1 Removing the Transfer/Detack Corotron Assembly

SKY002N

Notes:

REP 10.1 Fuser Assembly

Parts List on PL 6.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Open the Side Door.
4. (Figure 1): Remove the Fuser Assembly.

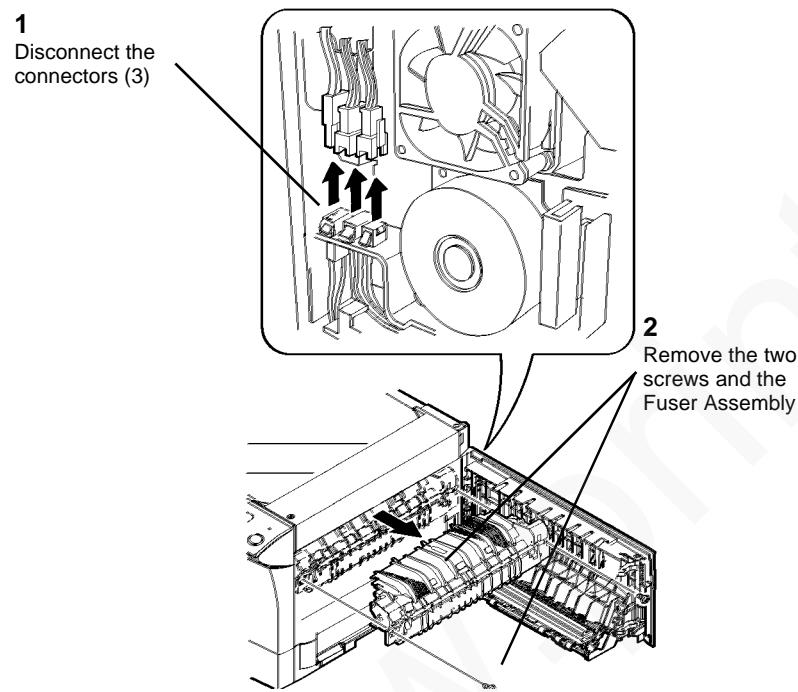


Figure 1 Removing the Fuser Assembly

7. (Figure 2): Remove the Heat Roll.

REP 10.2 Heat Roll

Parts List on PL 6.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

NOTE: Cut cable ties as necessary.

5. (Figure 1): Remove the End Covers and open the assembly.

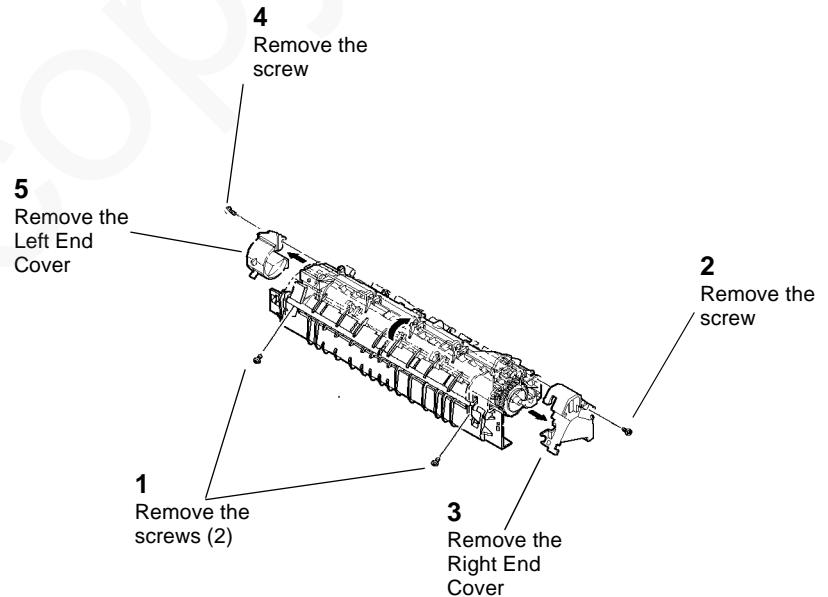


Figure 1 Removing the End Covers

6. Remove the Heat Rod (REP 10.8).

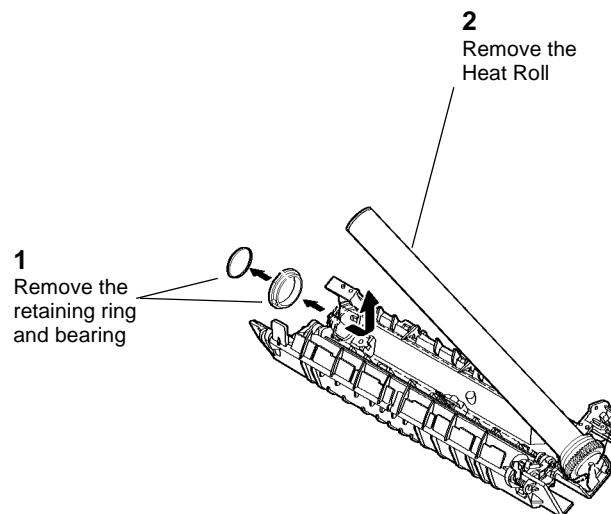


Figure 2 Removing the Heat Roll

SKY025N

REP 10.3 Pressure Roll

Parts List on PL 6.2

Removal

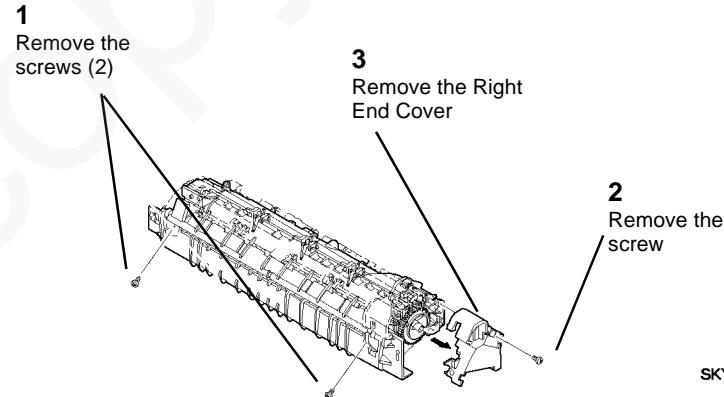
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

NOTE: Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover and open the assembly.



SKY017N

Figure 1 Removing the Right End Cover

6. (Figure 2): Remove the Pressure Roll Arms.

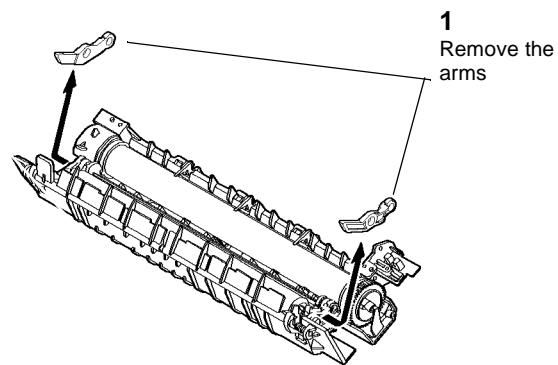


Figure 2 Removing the Pressure Roll Arms

7. (Figure 3): Remove the Pressure Roll.

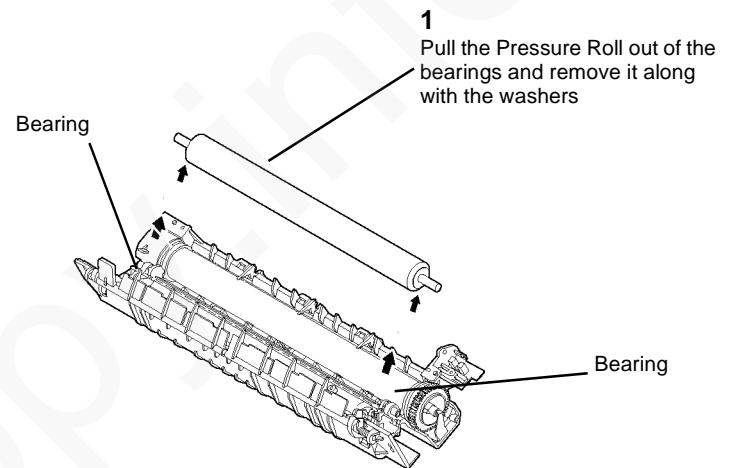


Figure 3 Removing the Pressure Roll

REP 10.4 Thermistor (RT1)

Parts List on PL 6.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure

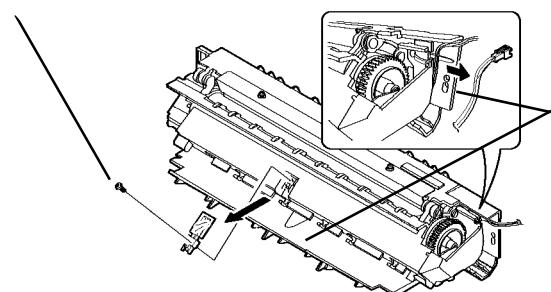
1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).

NOTE: Cut cable ties as necessary.

4. (Figure 1): Remove the Thermistor.

2

Remove the screw and the thermistor



SKY015N

Figure 1 Removing the Thermistor

REP 10.5 Fuser Jam Sensor (Q3)

Parts List on PL 6.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure

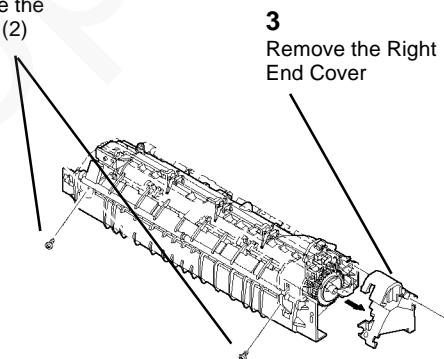
1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

NOTE: Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover.

1

Remove the screws (2)



SKY017N

Figure 1 Removing the Right End Cover

6. (Figure 2): Remove the Fuser Jam Sensor.

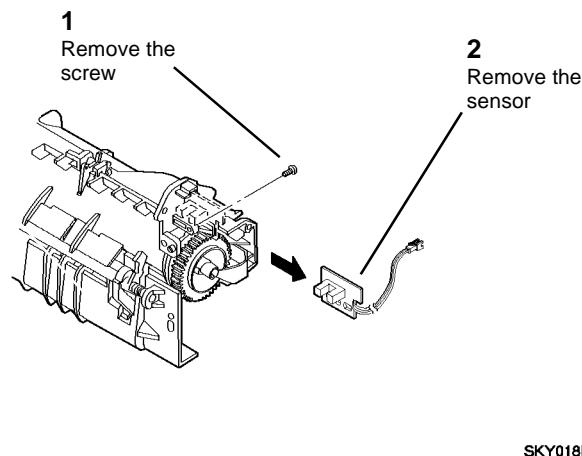


Figure 2 Removing the Fuser Jam Sensor

REP 10.6 Ventilation Fan (MOT 3)

Parts List on PL 2.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the six screws and the PWB Cover (PL 7.1).
4. (Figure 1): Remove the Ventilation Fan.

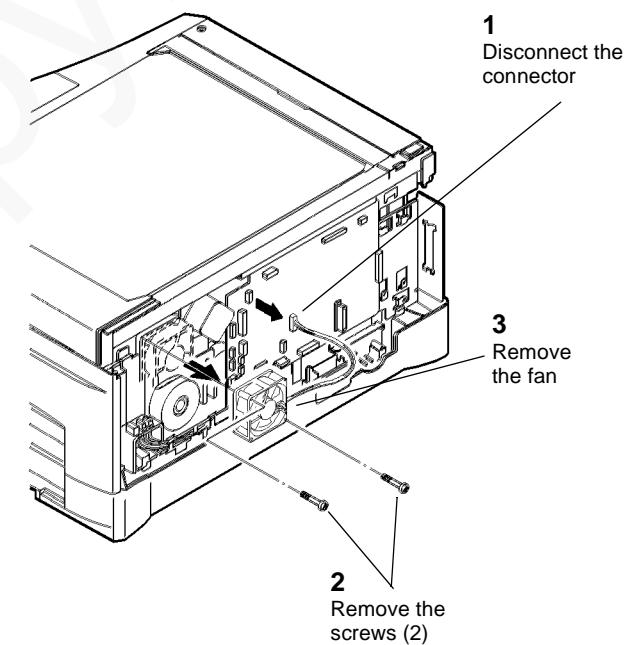


Figure 1 Removing the Ventilation Fan

REP 10.7 Exit Sensor (Q4)

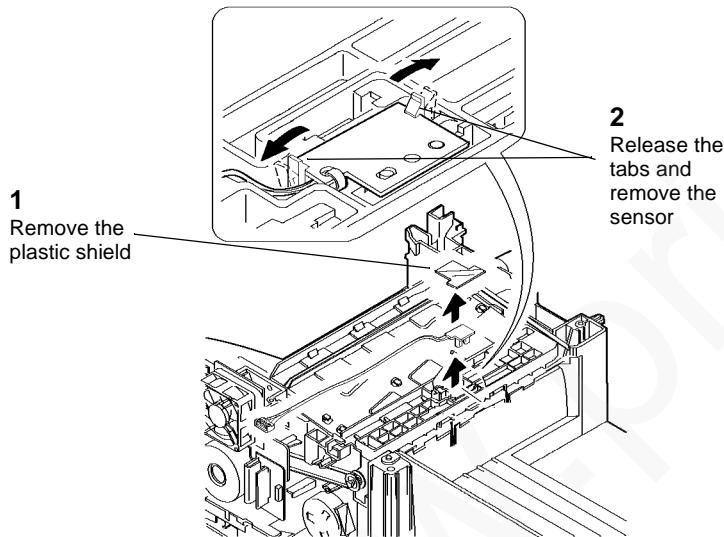
Parts List on PL 6.3

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Document Cover Assembly
 - b. Rear Cover
 - c. Top Right Cover
 - d. Top Left Cover
 - e. Document Glass Assembly (REP 6.1)
 - f. Control Console (REP 14.5)
 - g. Main PWB (REP 1.1)
 - h. Optics Frame Assembly (REP 6.6)
2. (Figure 1): Remove the Exit Sensor.



SKY029N

Figure 1 Removing the Exit Sensor

REP 10.8 Heat Rod

Parts List on PL 6.1

Removal

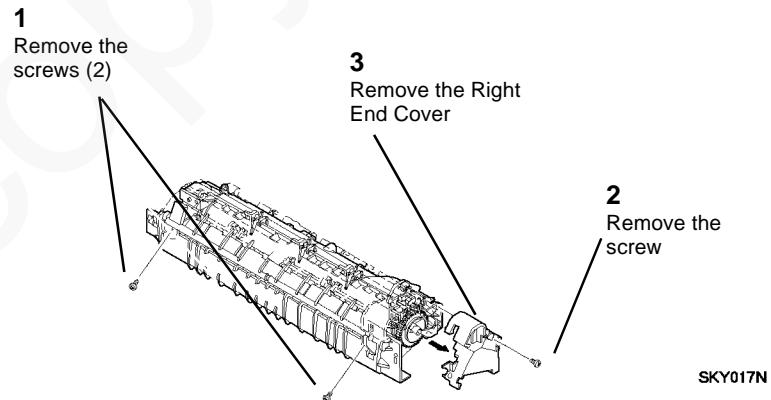
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

NOTE: Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover.



SKY017N

Figure 1 Removing the Right End Cover

CAUTION

Wear gloves or wrap a sheet of paper around the Heat Rod when handling it. Do not touch the glass section of the Heat Rod. Oil from fingers can cause damage to the rod. If you touch the Heat Rod, clean the rod with Film Remover on a lint-free cloth.

6. (Figure 2): Remove the Heat Rod.

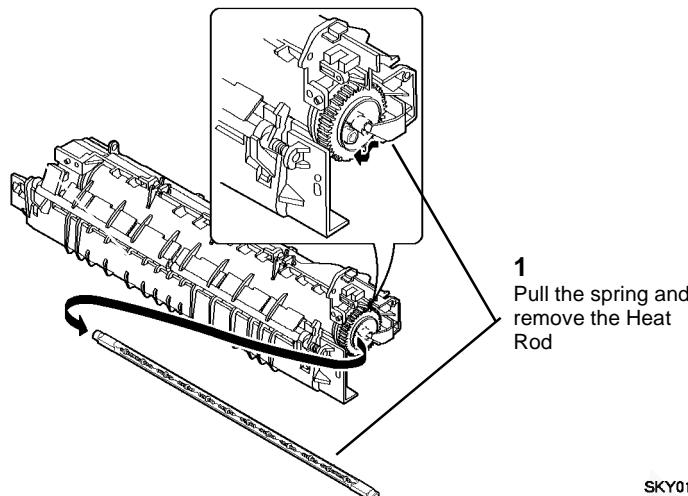


Figure 2 Removing the Heat Rod

SKY019N

REP 10.9 Thermostat

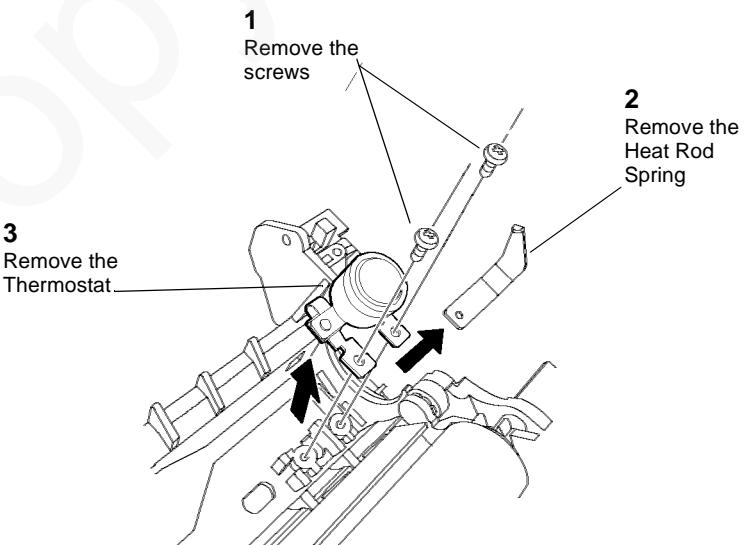
Parts List on PL 6.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).
5. Remove the Heat Roll (REP 10.2).
6. (Figure 1): Remove the Thermostat.



SKY027N

Figure 1 Removing the Thermostat

REP 10.10 Paper Guide

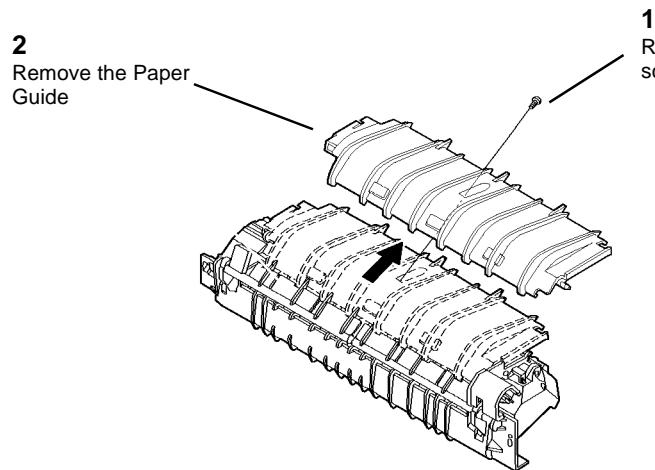
Parts List on PL 6.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. (Figure 1): Remove the Paper Guide.



SKY016N

Figure 1 Removing the Paper Guide

REP 10.11 Stripper Fingers

Parts List on PL 6.1

Removal

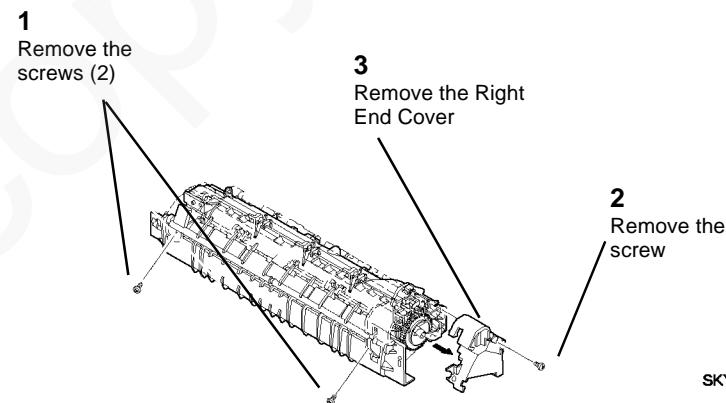
WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

NOTE: Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover and open the assembly.



SKY017N

Figure 1 Removing the Right End Cover

6. (Figure 2): Remove the Stripper Fingers.

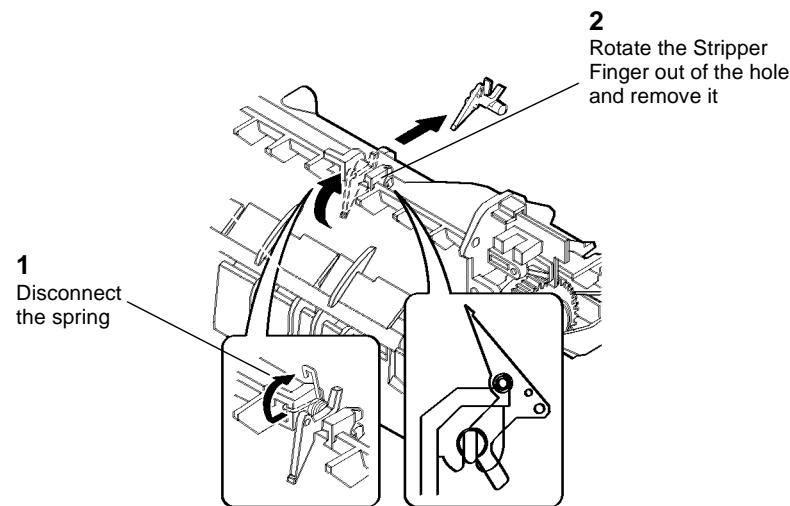


Figure 2 Removing the Stripper Fingers

REP 10.12 Fuser Gate

Parts List on PL 6.2

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord. Allow the Fuser to cool before performing the procedure.

1. Remove the Document Cover Assembly.
2. Remove the Rear Cover.
3. Remove the Fuser Assembly (REP 10.1).
4. Remove the Paper Guide (REP 10.10).

NOTE: Cut cable ties as necessary.

5. (Figure 1): Remove the Right End Cover.

SKY020N

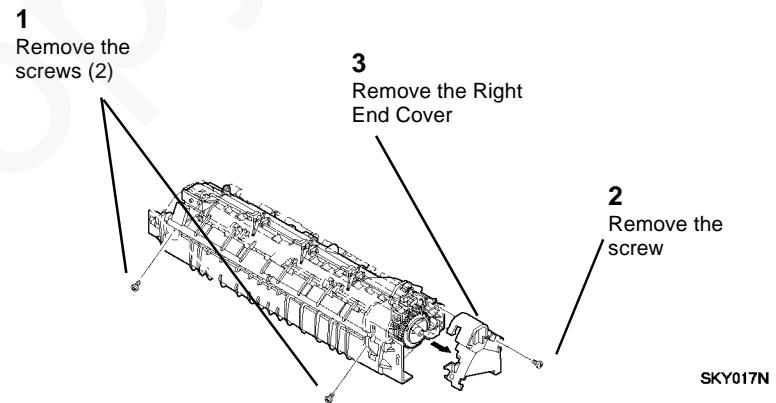
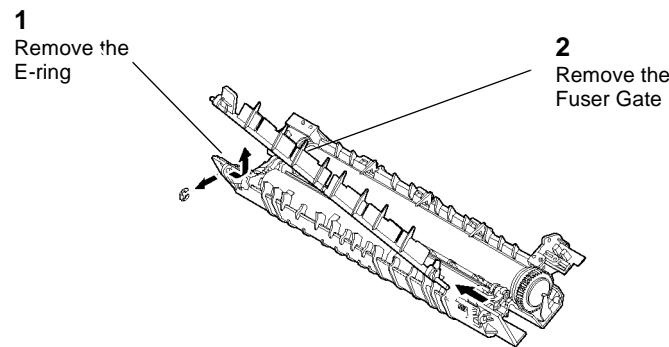


Figure 1 Removing the Right End Cover

6. (Figure 2): Remove the Fuser Gate.



SKY021N

Figure 2 Removing the Fuser Gate

REP 14.5 Control Console

Parts List on PL 1.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Raise the Document Cover Assembly and open the Front Door.

CAUTION

Take care not to damage the ribbon cable and the harness connected to the Control Console PWB.

2. (Figure 1): Remove the Control Console.

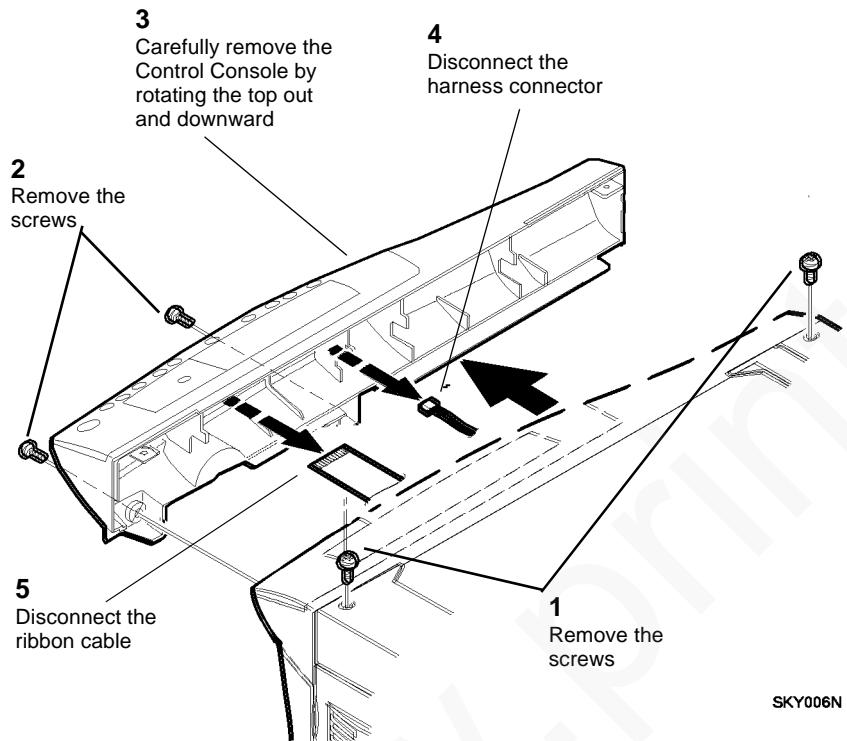


Figure 1 Removing the Control Console

REP 14.7 Output Tray

Parts List on PL 1.1

Removal

WARNING

Switch off the Main Power Switch. Disconnect the Power Cord.

1. Remove the following:
 - a. Paper Tray (PL 4.1)
 - b. Document Cover Assembly
 - c. Rear Cover
 - d. Top Left Cover
2. Remove the screw located on the left side of the Output Tray.
3. Pry the tray away from the Main Power Switch using a flat-bladed screwdriver.
4. Release the locking tab which is located in the front left corner of the Output Tray.
5. (Viewed from the Top) Remove the Output Tray by rotating it counterclockwise.

Notes:

ADJ 6.1 Copy Density

Purpose

The purpose is to set the exposure level so that the correct density is produced.

Check

1. Clean the Optics and the Document Glass.
2. Set the magnification to 100%.
3. Set the Exposure to the Text mode.
4. Make five copies of Side A of the standard test pattern. Align the Test Pattern to provide the measurement targets.
5. (Figure 1): Check the fifth copy. The .10 line pair on the copy should be partially visible but not legible. The .05 line pair should not be visible on the copy.
 - a. If the .20B line pair is just visible and the .1 line pair is not visible, the exposure is correct.
 - b. If the .20B line pair is not visible, decrease the exposure.
 - c. If the .1 line pair is visible, increase the exposure.

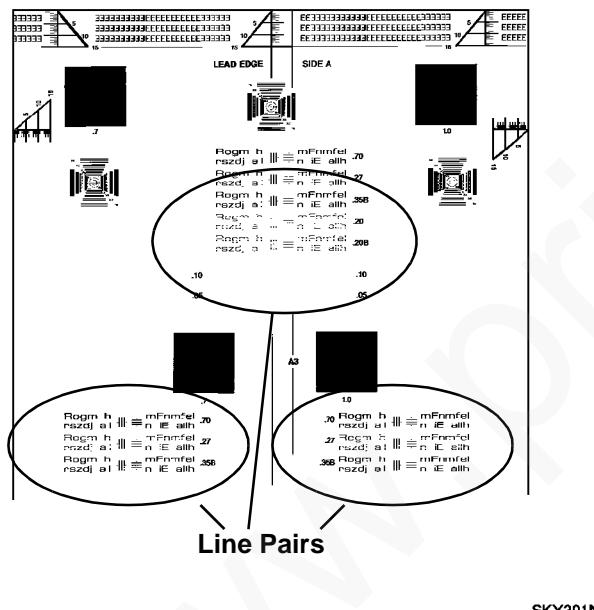
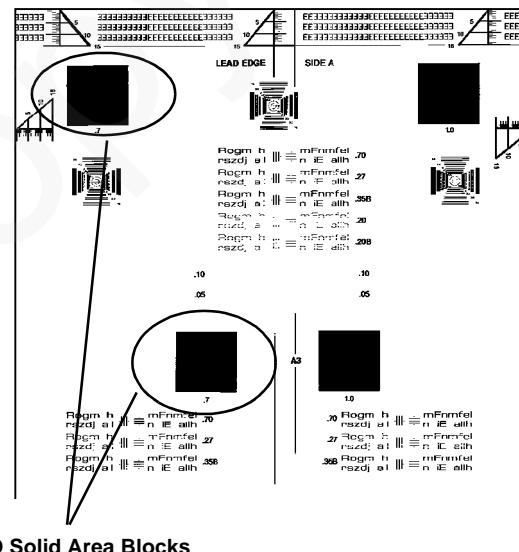


Figure 1 Checking the Exposure on the Copy

6. Repeat steps 4 and 5 for the Auto mode.

7. Set the Exposure to the Photo mode.
8. Make five copies of Side A of the standard test pattern. Align the Test Pattern to provide the measurement targets.
9. (Figure 2): Check the fifth copy. The .7 Solid Area Density Block on the copy should match the corresponding block on the Test Pattern.
 - a. If the .7 Solid Area Density Block matches the corresponding block on the Test Pattern, the exposure is correct.
 - b. If the .7 Solid Area Density Block is too light, decrease the exposure.
 - c. If the .7 Solid Area Density Block is too dark, increase the exposure.



SKY201N

Figure 2 Checking the Exposure on the Copy

10. Repeat steps 8 and 9 for the Toner Saver mode.

Adjustment

1. Enter Diagnostic Code 46-1 and adjust the mode(s) identified in the check as requiring adjustment.
2. Adjust the Text mode.
 - a. Select Text.
 - b. Place the Test Pattern as described in the check.
 - c. Press the Start button.
 - A copy is made.

- d. Decrease the number to increase the exposure (copy becomes lighter) and press the Start button.
 - Evaluate the copy per the check and adjust as required.
 - e. Increase the number to decrease the exposure (copy becomes darker) and press the Start button.
 - Evaluate the copy per the check and adjust as required.
3. Adjust the Auto mode.
- a. Select Auto.
 - b. Place the Test Pattern as described in the check.
 - c. Press the Start button.
 - A copy is made.
 - d. Decrease the number to increase the exposure (copy becomes lighter) and press the Start button.
 - Evaluate the copy per the check and adjust as required.
 - e. Increase the number to decrease the exposure (copy becomes darker) and press the Start button.
 - Evaluate the copy per the check and adjust as required.
4. Adjust the Photo mode.
- a. Select Photo.
 - b. Place the Test Pattern as described in the check.
 - c. Press the Start button.
 - A copy is made.
 - d. Decrease the number to increase the exposure (copy becomes lighter) and press the Start button.
 - Evaluate the copy per the check and adjust as required.
 - e. Increase the number to decrease the exposure (copy becomes darker) and press the Start button.
 - Evaluate the copy per the check and adjust as required.
5. Adjust the Toner Saver mode.
- a. Select Toner Saver.
 - b. Place the Test Pattern as described in the check.
 - c. Press the Start button.
 - A copy is made.
 - d. Decrease the number to increase the exposure (copy becomes lighter) and press the Start button.
 - Evaluate the copy per the check and adjust as required.
 - e. Increase the number to decrease the exposure (copy becomes darker) and press the Start button.
 - Evaluate the copy per the check and adjust as required.
6. Exit Diagnostics.

ADJ 6.2 Lens/CCD Module

Purpose

The purpose is to position the Lens/CCD Module at the factory-specified setting.

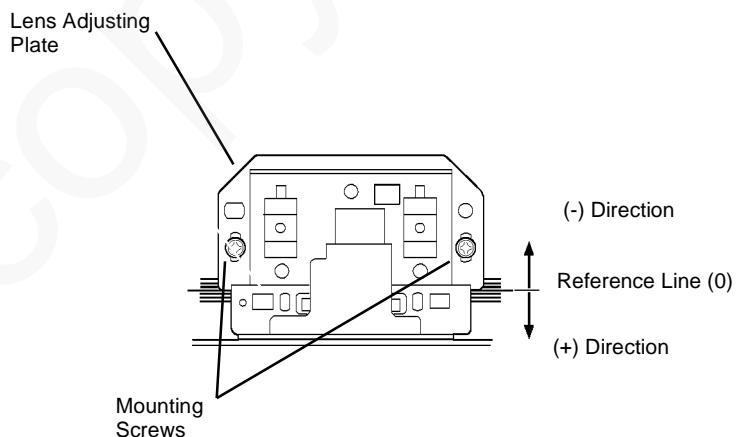
Adjustment

CAUTION

Only the mounting screws shown below are to be utilized by the Service Representative. The module is available only as an assembly and must not be disassembled

NOTE: Example: Lens Unit Number is -2.8. Install the edge of the Lens/CCD Module two lines from the Reference Line.

1. (Figure 1): Install the module so that the Lens Adjustment Plate is aligned with the lines on the Base Plate according to the number written on the Lens Adjusting Plate.



SKY091N

Figure 1 Adjusting the Lens/CCD Module

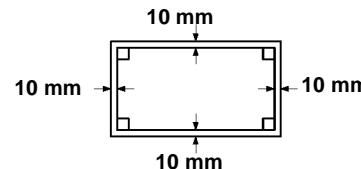
ADJ 6.7 Image Distortion (Horizontal and Vertical)

Purpose

The purpose is to correct image distortion by changing the parallelism of the mirrors (Exposure Lamp Carriage and Half-Rate Carriage).

Check

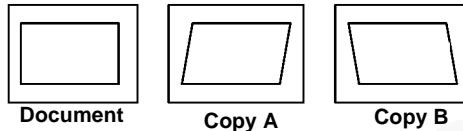
1. (Figure 1): Make a Test Pattern for the check and adjustment by drawing a rectangle on a sheet of 8-1/2" X 14" (B4) paper. Ensure that the corners are square.



SKY070N

Figure 1 Making the Test Pattern

2. (Figure 2): Make several copies of the Test Pattern.
 - a. If the copies look like the Document, the check is good.
 - b. If the copies look like A or B, perform the Horizontal Image Distortion Adjustment.



SKY069N

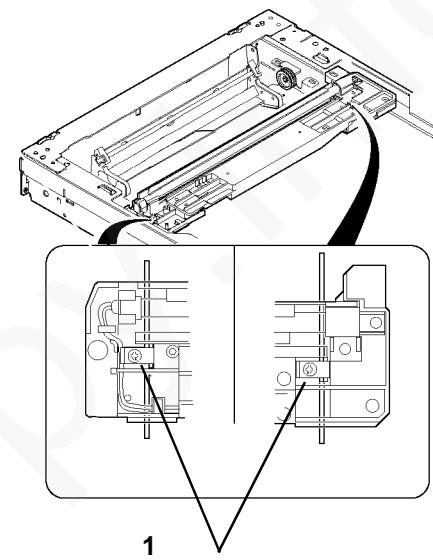
Figure 2 Checking the Copies

Adjustment

HORIZONTAL IMAGE DISTORTION

1. Remove the Document Glass Assembly (REP 6.1).

2. (Figure 3): Loosen the screws on the Exposure Lamp Carriage.



SKY072N

Figure 3 Loosening the Exposure Lamp Carriage Screws

3. (Figure 4): Rotate the Scan Drive Gear until the Half-Rate Carriage comes in contact with the Positioning Brackets.
 - a. If contact is equal on both sides, the adjustment is good.
 - b. If there is no contact on one side, continue with the adjustment.
4. (Figure 5): Loosen the setscrews on the Scan Cable Hub on the side where there was no contact.

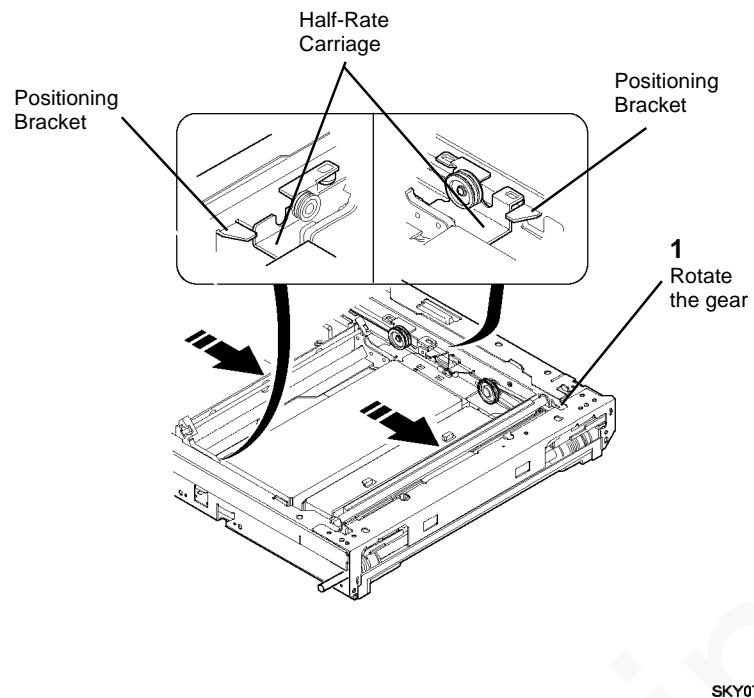


Figure 4 Checking the Contact of the Half-Rate Carriage

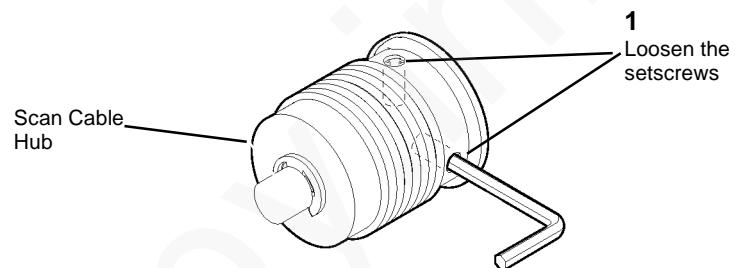


Figure 5 Loosening the Setscrews on the Scan Cable Hub

5. (Figure 6): Without moving the Scan Cable Hub Shaft, rotate the Hub until the Half-Rate Carriage makes contact with the Positioning Bracket.

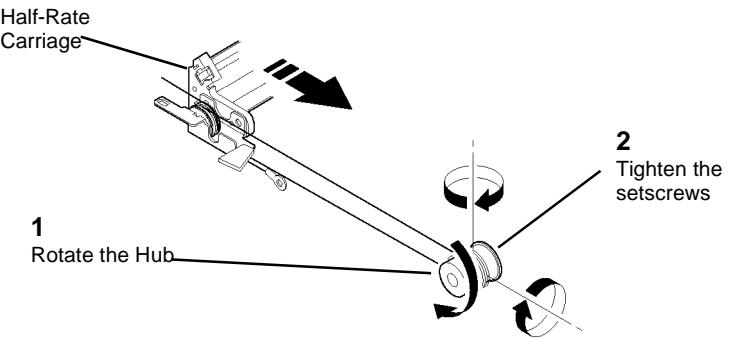
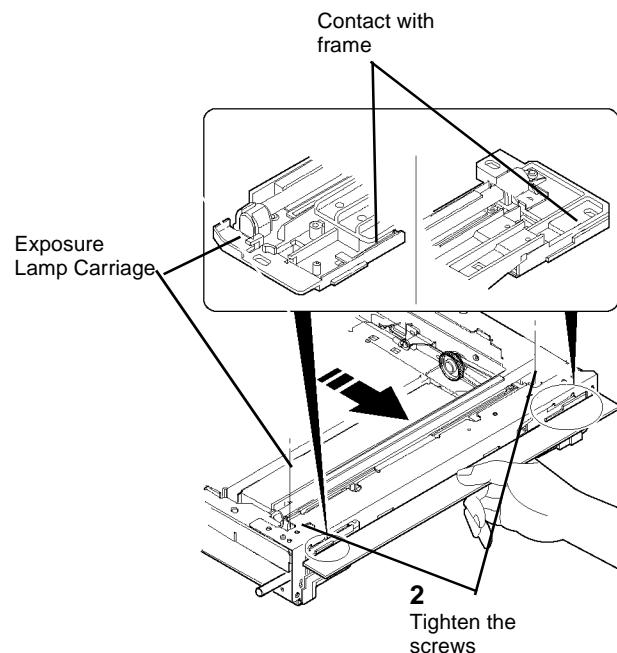


Figure 6 Aligning the Half-Rate Carriage

- Repeat steps 3 through 5 until the parallelism of the Half-Rate Carriage is properly adjusted.
- (Figure 7): With the Half-Rate Carriage against the Positioning Brackets, move the Exposure Lamp Carriage into contact with the frame and tighten the mounting screws.

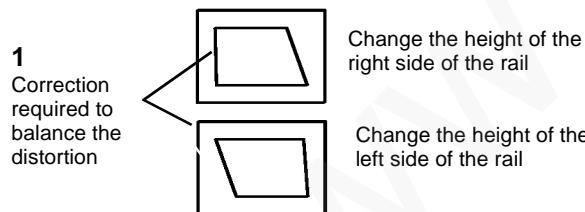


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Figure 7 Aligning the Half-Rate Carriage

VERTICAL IMAGE DISTORTION

- (Figure 8): Correction is made for Vertical Image Distortion when the copy of the Test Pattern looks like the following figure. If all corners are well-formed right angles, no further adjustment is required,



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Figure 8 Evaluating the Copies

ADJ 6.8 Image Magnification

Purpose

The purpose is to provide the correct vertical and horizontal magnification.

Check

1. Make a 100% copy of Side B of the Standard Test Pattern.
2. The magnification of a 100% copy should be within 1.0% of the original size in the vertical and horizontal directions.

Adjustment

MAGNIFICATION (Front to Rear)

1. Enter Diagnostic Code 48-1.
2. Press the Exposure Mode button until the Text lamp is lit.
3. To change the magnification, press the Copy Quantity buttons.
 - a. To increase the magnification, increase the number.
 - b. To decrease the magnification, decrease the number.
 - c. Press the Clear button.

MAGNIFICATION (Lead Edge to Trail Edge)

1. Enter Diagnostic Code 48-1.
2. Press the Exposure Mode button until the Photo lamp is lit.
3. To change the magnification, press the Copy Quantity buttons.
 - a. To increase the magnification, increase the number.
 - b. To decrease the magnification, decrease the number.
 - c. Press the Clear button.
4. Repeat the check.

ADJ 8.2 Lead Edge Deletion

Purpose

The purpose is to set the Lead Edge Deletion to within specification.

Check

1. Make a copy with the Document Cover Assembly open (Dark Dusting).
2. Check that the Lead Edge Deletion is 1 to 4 mm.

Adjustment

1. Enter Diagnostic Code **48-1**.
2. Press the **Exposure** button until the **Text** lamp is lit.

NOTE: Each increment to the **Copy Quantity** display changes the deletion by 0.1 mm.

3. To change the Lead Edge Deletion, press the **Copy Quantity** buttons.
 - a. To increase the deletion, increase the number.
 - b. To decrease the deletion, decrease the number.
 - c. Press the **Clear** button.
4. Repeat the check.

ADJ 8.3 Trail Edge Deletion

Purpose

The purpose is to set the Trail Edge Deletion to within specification.

Check

1. Make a copy with the Document Cover Assembly open (Dark Dusting).
2. Check that the Trail Edge Deletion is a maximum of 4 mm.

Adjustment

1. Enter Diagnostic Code **48-1**.
2. Press the **Exposure** button until the **Auto**, **Text**, and **Photo** lamps are lit.

NOTE: Each increment to the **Copy Quantity** display changes the deletion by 0.1 mm.

3. To change the Trail Edge Deletion, press the **Copy Quantity** buttons.
 - a. To increase the deletion, increase the number.
 - b. To decrease the deletion, decrease the number.
 - c. Press the **Clear** button.
4. Repeat the check.

ADJ 9.1 Developer Bias

Purpose

The purpose is to adjust the developer bias voltage.

Adjustment

WARNING

Switch off the Main Power Switch, and disconnect the Power Cord before inserting the meter lead probes onto the Power Supply PWB.

1. Set the digital multi meter range to 4000 VDC.
2. (Figure 1): Connect the positive lead to connector pin CN10-1

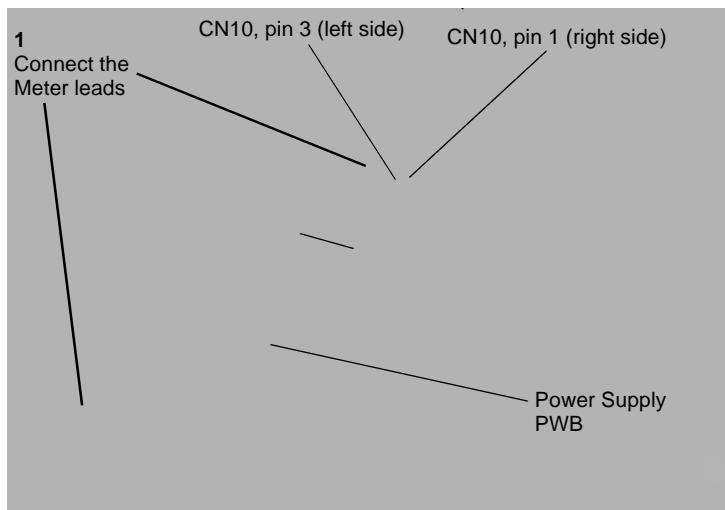


Figure 1 Adjusting the Developer Bias Voltage

3. Connect the negative lead to CN10-2.
4. Enter Diagnostic Code 25-1. When Start is pressed, the Developer Bias is present for 30 seconds.
5. Adjust VR-121 for a voltage of -380 ± 15 VDC.

ADJ 9.2 Grid Bias

Purpose

The purpose is to adjust the grid bias voltage.

Adjustment

WARNING

Switch off the Main Power Switch, and disconnect the Power Cord before inserting the meter lead probes onto the Power Supply PWB.

NOTE: Set the LOW output voltage first. Set the HIGH output voltage last..

1. Set the digital multi meter range to 4000 VDC.
2. (Figure 1): Connect the positive lead to connector pin CN11-3

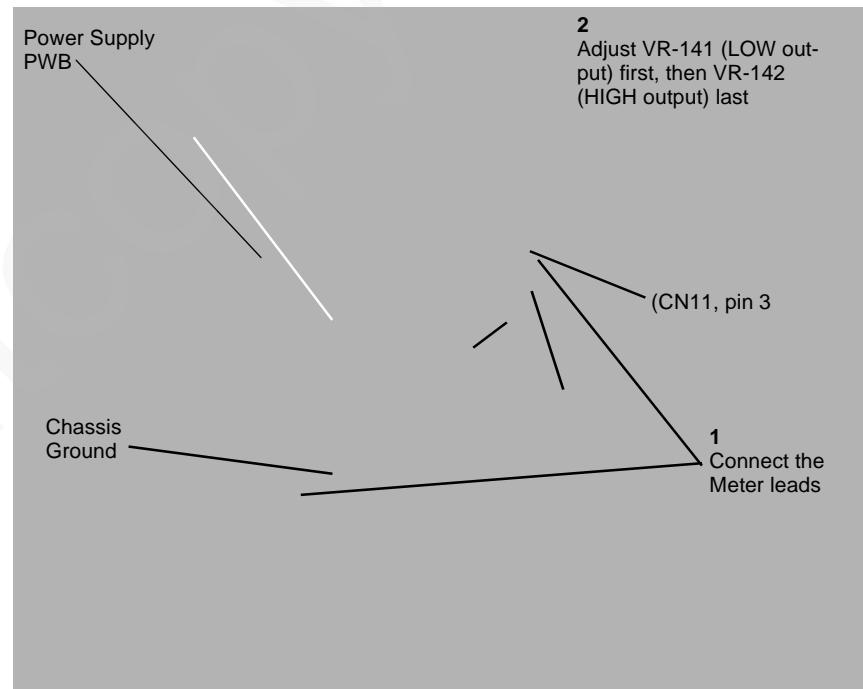


Figure 1 Adjusting the Grid Bias Voltage

3. Connect the negative lead to the Chassis Ground.
4. Enter Diagnostic Code 8-3.
5. Adjust VR-141 for a LOW output voltage of -420 ± 20 VDC.
6. Enter Diagnostic Code 8-2.
7. Adjust VR-142 for a HIGH output voltage of $+580 \pm 20$ VDC.

Notes:

5 Parts Lists

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Introduction

Overview

The Parts List section identifies all part numbers and the corresponding location of all spared subsystem components.

Organization

Parts Lists

Each item number in the part number listing corresponds to an item number in the related illustration. All the parts in a given subsystem of the machine will be located in the same illustration or in a series of associated illustrations.

Electrical Connectors and Fasteners

This section contains the illustrations and descriptions of the plugs, jacks, and fasteners used in the machine. A part number listing of the connectors is included.

Common Hardware

The common hardware is listed in alphabetical order by the letter or letters used to identify each item in the part number listing and in the illustrations. Dimensions are in millimeters unless otherwise identified.

Part Number Index

This index lists all the spared parts in the machine in numerical order. Each number is followed by a reference to the parts list on which the part may be found.

Other Information

Abbreviations

Abbreviations are used in the parts lists and the exploded view illustrations to provide information in a limited amount of space. The following abbreviations are used in this manual:

Table 1

Abbreviation	Meaning
A	Amp
DH	Document Handler
EMI	Electro Magnetic Induction
HZ	Hertz
MLN	Multinational
NOHAD	Noise Ozone Heat Air Dirt
P/O	Part of
PWB	Printed Wiring Board
REF	Reference
R/E	Reduction/Enlargement
USMG	United States Marketing Group
USO	United States Operations
V	Volt
W/	With
W/O	Without
XCL	Xerox Canada Limited
XL	Xerox Limited
XLA	Xerox Latin America

Symbology

Symbology used in the Parts List section is identified in the Symbology section.

Subsystem Information

Use of the Term "Assembly"

The term "assembly" will be used for items in the part number listing that include other itemized parts in the part number listing. When the word "assembly" is found in the part number listing, there will be a corresponding item number on the illustrations followed by a bracket and a listing of the contents of the assembly.

Brackets

A bracket is used when an assembly or kit is spared, but is not shown in the illustration. The item number of the assembly or kit precedes the bracket; the item numbers of the piece parts follow the bracket.

Tag

The notation "Tag" in the part description indicates that the item is the entire Tag. The notation "P/O Tag" indicates that the item is only part of a tag change, or modification, to the equipment.

When a part or an item assembly has a Tag associated with it, check the change Tag Index in the General Information section of the Service Data for the name and purpose of the modification.

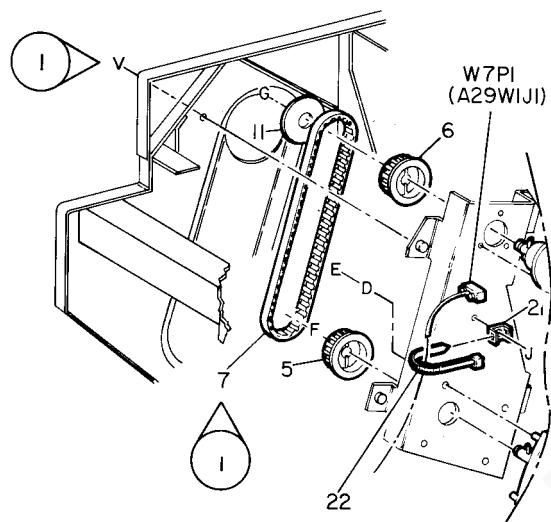
In some cases, a part or assembly may be spared in two versions: with the Tag and without the Tag. In those cases, use whichever part is appropriate for the configuration of the machine on which the part is to be installed. If the machine does not have a particular Tag and the only replacement part available is listed as "W/Tag," install the Tag kit or all of the piece parts. The Change Tag Index tells you which kit or piece parts you need.

Whenever you install a Tag kit or all the piece parts that make up a Tag, mark the appropriate number on the Tag matrix.

Symbology

The following symbols are used in the Parts List sections of the documentation.

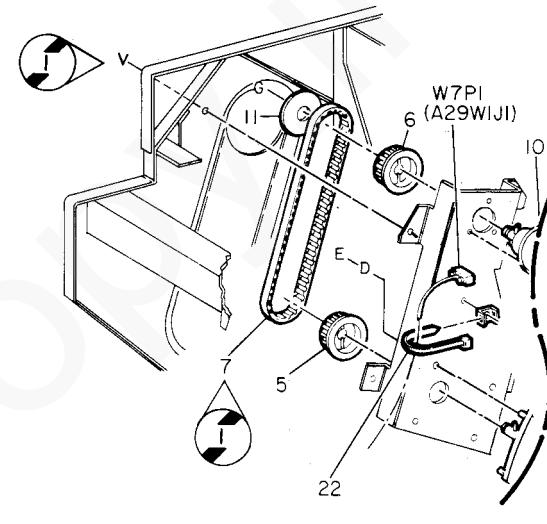
A Tag number within a circle pointing to an item number shows that the part has been changed by the tag number within the circle (Figure 1). Information on the modification is in the Change Tag Index.



O	Z004	A
850	PL	I

Figure 1 With Tag Symbol

A Tag number within a circle having a shaded bar and pointing to an item number shows that the configuration of the part shown is the configuration before the part was changed by the Tag number within the circle (Figure 2).



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850	PL	I

Figure 2 Without Tag Symbol

A tag number within a circle with no apex shows that the entire drawing has been changed by the tag number within the circle (Figure 3). Information on the modification is in the Change Tag Index.

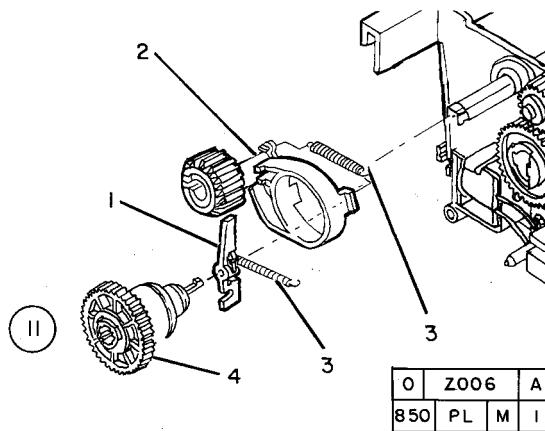


Figure 3 Entire Drawing With Tag Symbol

A tag number within a circle with no apex and having a shaded bar shows that the entire drawing was the configuration before being changed by the tag number within the circle (Figure 4).

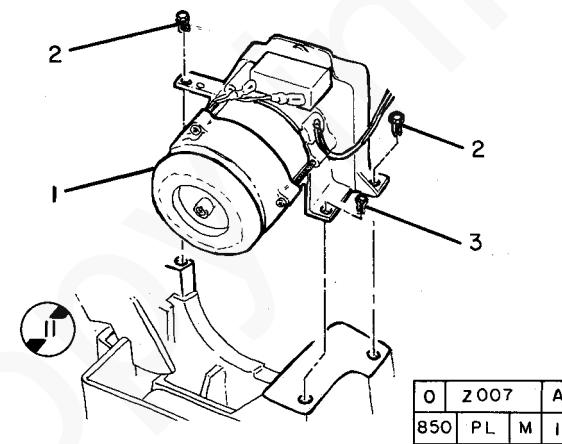
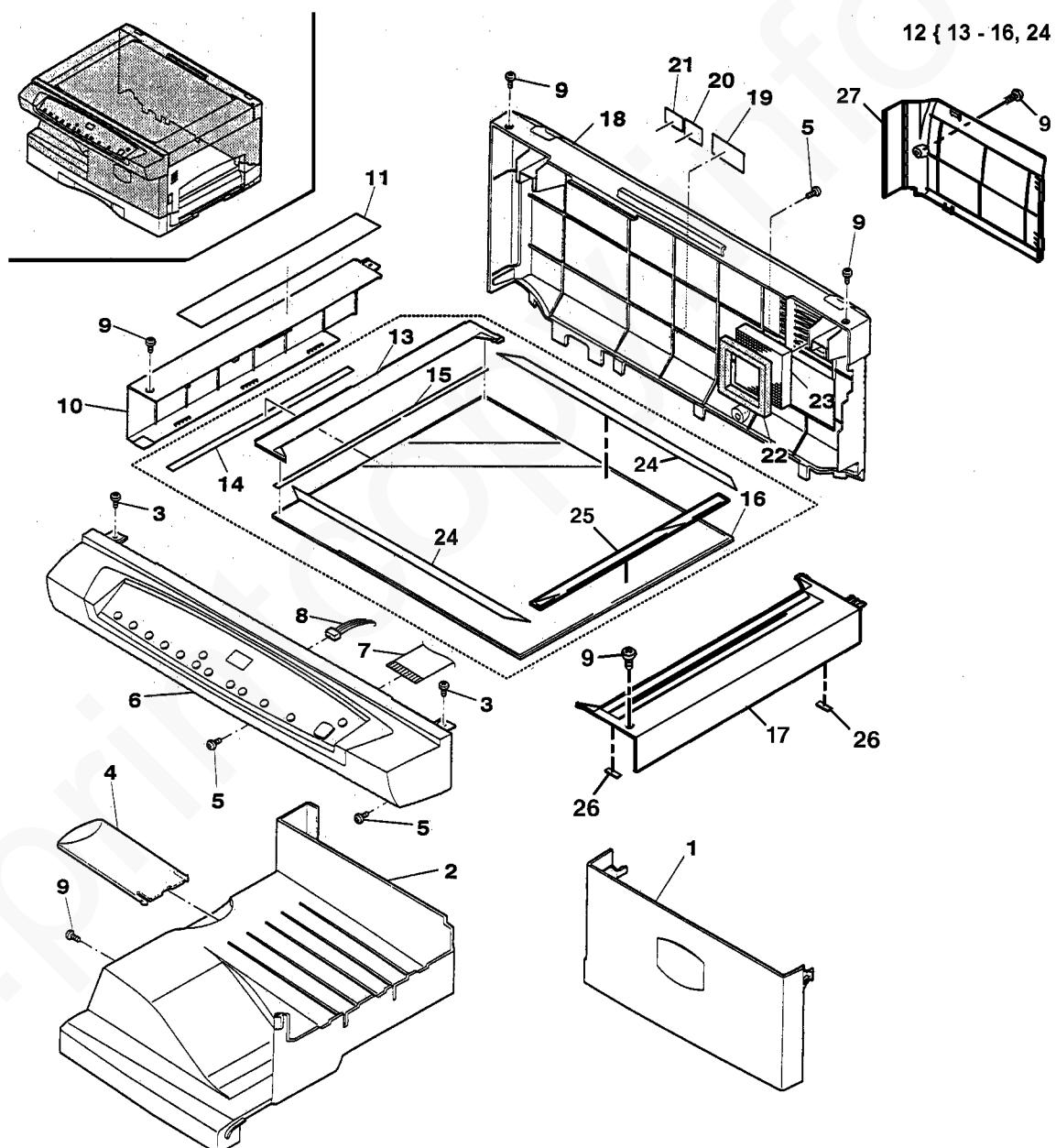


Figure 4 Entire Drawing Without Tag Symbol

PL 1.1 PRINTER COVERS (XD120F)

Item	Part	Description
1	2N1525	FRONT DOOR (USO/XCL)
-	2N1566	FRONT DOOR (XL)
2	-	OUTPUT TRAY (USO/XCL) (REP 14.7)
3	-	SCREW (3X8)
4	50N230	TRAY EXTENSION (USO/XCL)
-	50N259	TRAY EXTENSION (XL)
5	-	SCREW (4X12)
6	-	CONTROL CONSOLE (REP 14.5)
7	152N1630	CONTROL CONSOLE HARNESS
8	152N1637	HARNESS
9	-	SCREW (3X8)
10	-	TOP LEFT COVER
11	-	INSTRUCTION LABEL
12	90N138	DOCUMENT GLASS ASSEMBLY (USO/XCL) (REP 6.1)
-	90N139	DOCUMENT GLASS ASSEMBLY (XL) (REP 6.1)
13	-	REGISTRATION GUIDE
14	-	CALIBRATION STRIP
15	-	ADHESIVE STRIP
16	-	DOCUMENT GLASS
17	2N1561	TOP RIGHT COVER (XD120F)
18	2N1560	REAR COVER (XD120F)
19	-	CAUTION LABEL
20	-	LABEL
21	-	SERVICE LABEL
22	-	FAN GASKET
23	53N142	OZONE FILTER
24	-	DOCUMENT GLASS EDGE
25	62N147	SDF WINDOW (XD120F)
26	4N193	SDF GLASS CUSHION (XD120F)
27	-	SDF SMALL REAR COVER (XD120F)

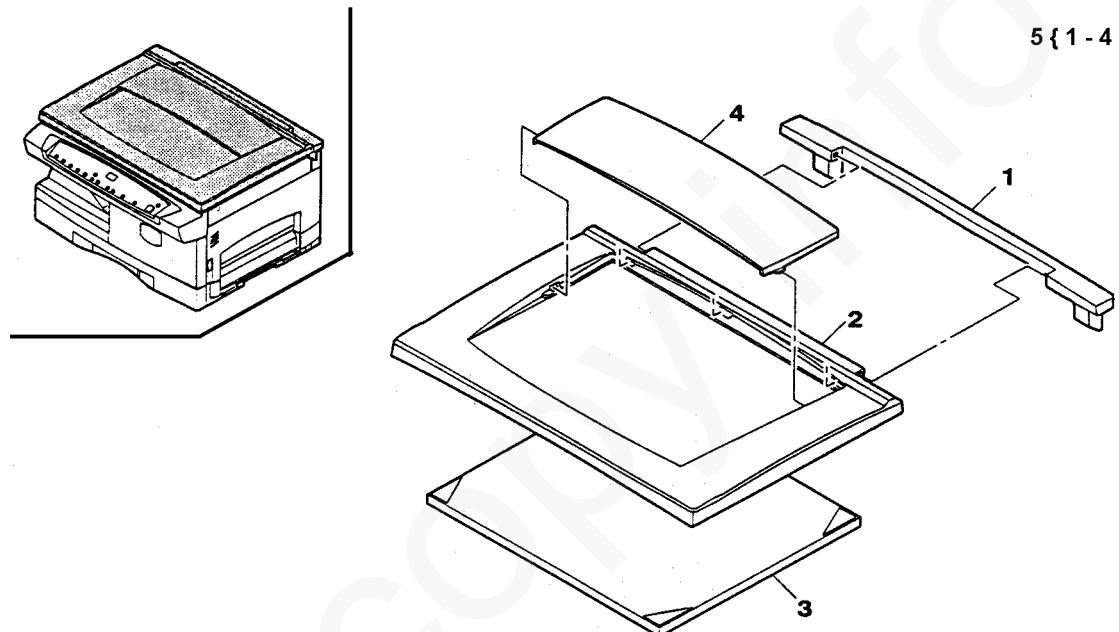


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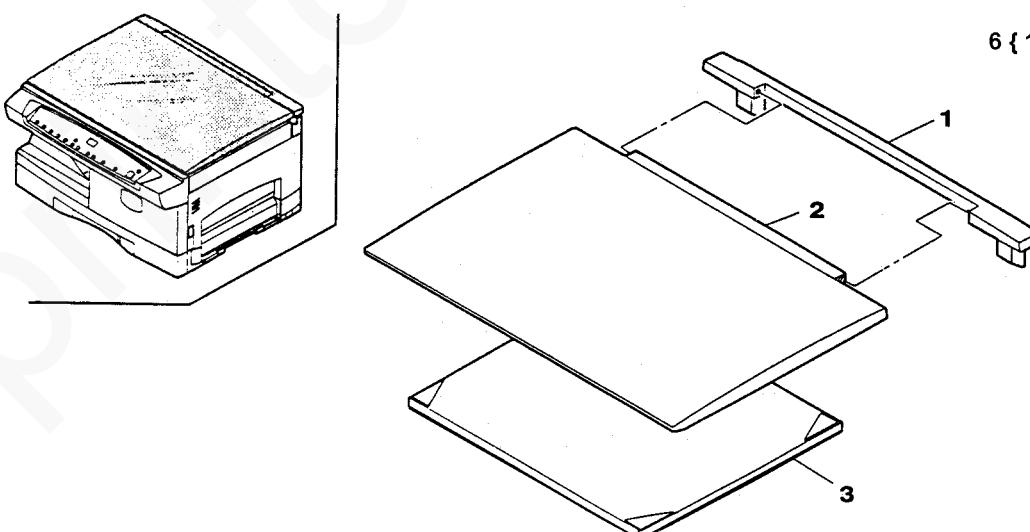
**PL 1.2 DOCUMENT GLASS COVER
(XD100/102/104)**

5 { 1 - 4

Item	Part	Description
1	-	REAR PIVOT ATTACHMENT
2	-	DOCUMENT COVER
3	-	DOCUMENT COVER CUSHION
4	-	DOCUMENT ORGANIZER
5	2N1534	DOCUMENT COVER ASSEMBLY (W/ORGANIZER) (XD100/104)
6	2N1526	DOCUMENT COVER ASSEMBLY (W/O ORGANIZER) (XD102)



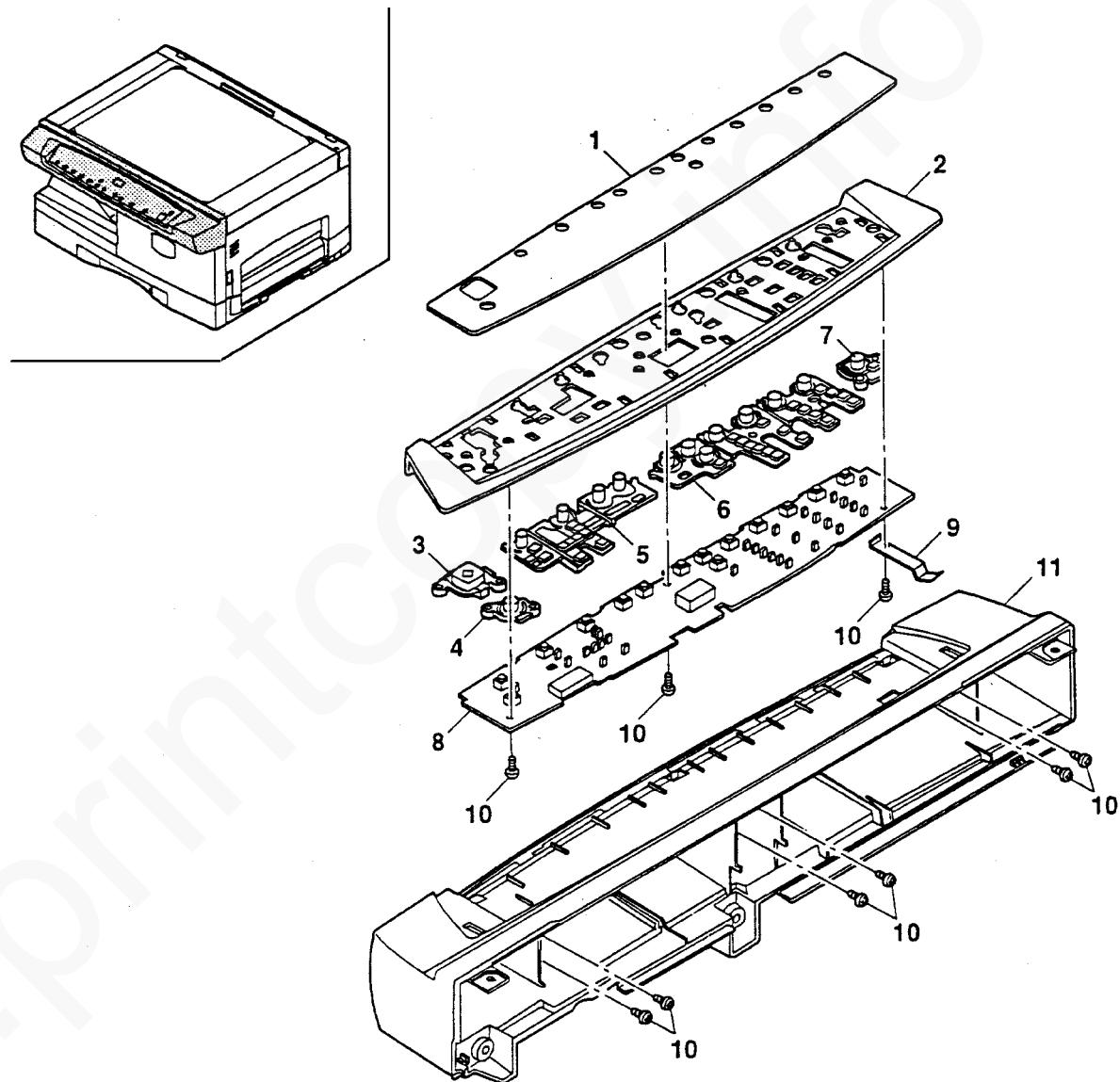
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PL 1.3 CONTROL CONSOLE (X100/102,XD120F)

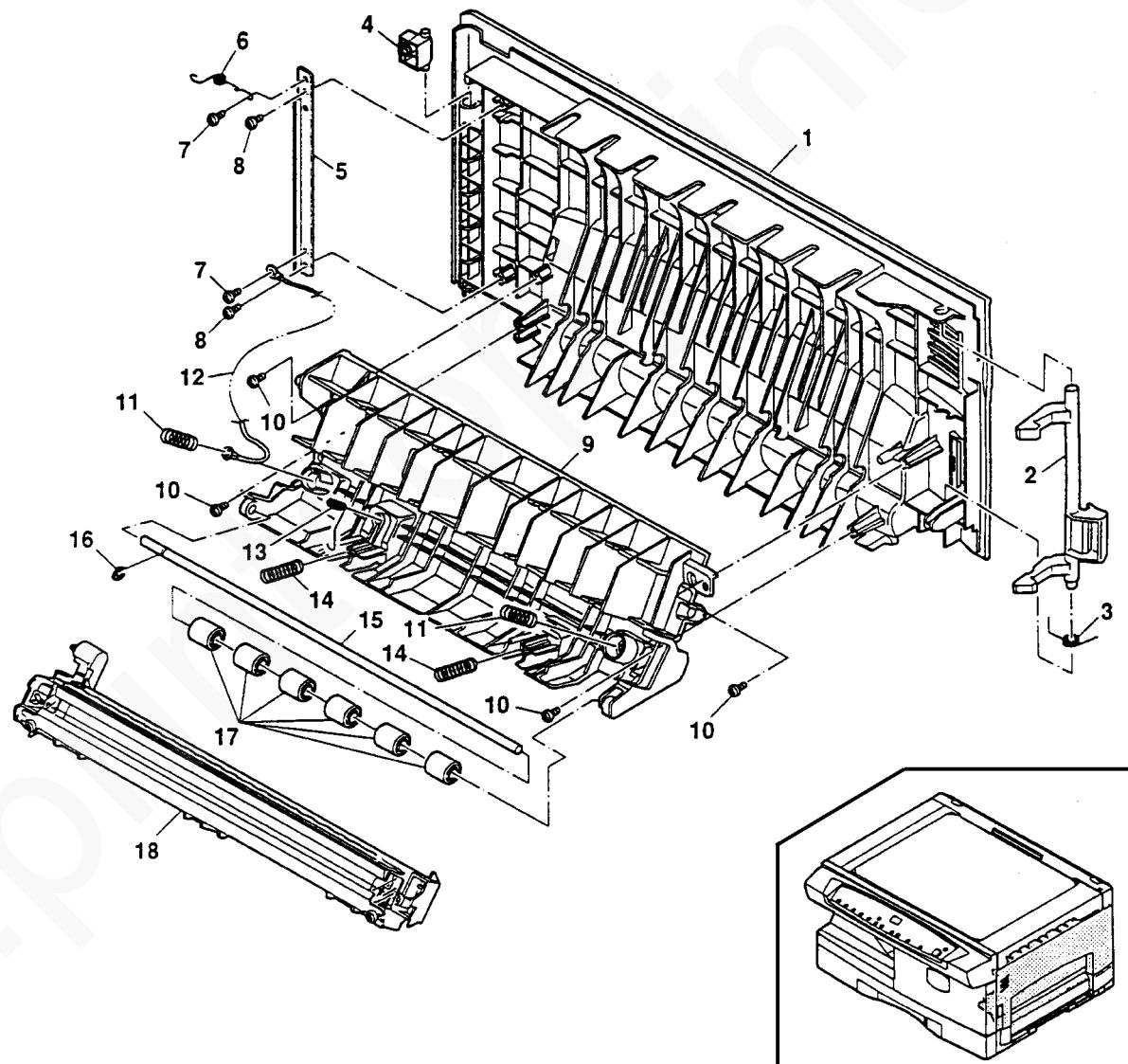
Item	Part	Description
1	53N162	CONTROL BUTTON COVER (ACO) (XL) (XD102) (US)
-	53N163	(XD102) (XL) (ACO)
-	53N164	(XD104) (XL) (ACO)
-	53N165	(XD100) (US)
-	53N166	(XD120F) (US)
2	-	CONTROL CONSOLE COVER
3	3N673	START PRINT BUTTON
4	3N669	CLEAR/STOP BUTTON
5	3N671	FUNCTION BUTTON (R)
6	3N672	FUNCTION BUTTON (L)
7	3N670	BOOK MODE SELECT BUTTON
8	140N5107	CONTROL CONSOLE PWB (XD100/102)
-	140N5206	CONTROL CONSOLE PWB (XD120F)
9	-	GROUNDING SPRING
10	-	SCREW (3X8)
11	-	CONTROL CONSOLE



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PL 1.4 SIDE DOOR

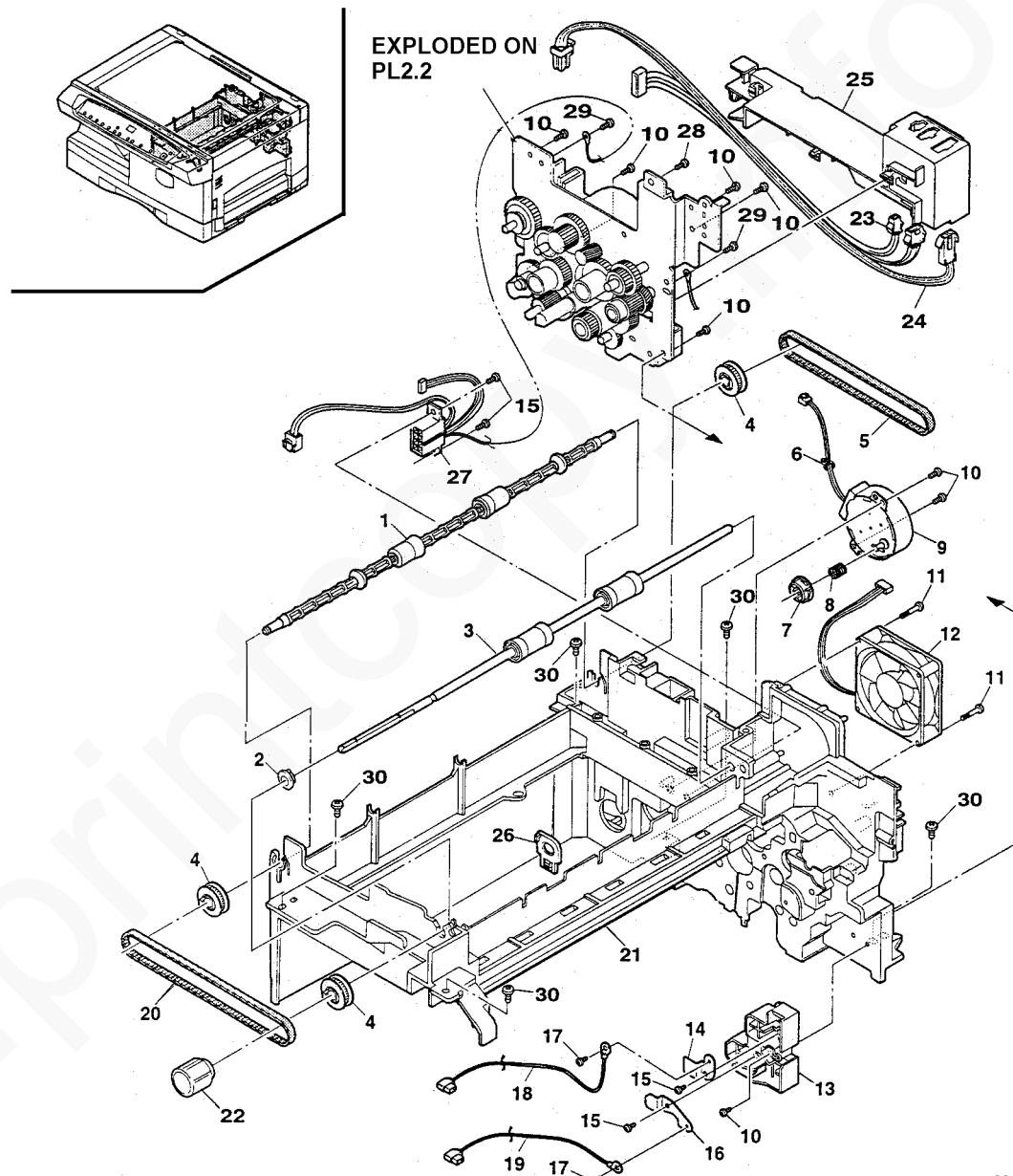
Item	Part	Description
1	-	SIDE DOOR
2	3N668	SIDE DOOR LATCH
3	9N978	LATCH SPRING
4	-	HINGE GUIDE
5	-	GROUNDING PLATE
6	-	GROUNDING SPRING
7	-	SCREW (3X6)
8	-	SCREW (3X6)
9	-	INNER PAPER GUIDE
10	-	SCREW (3X10)
11	9N964	PRESSURE SPRING
12	152N1635	GROUND WIRE
13	9N963	GROUNDING SPRING
14	9N962	PRESSURE SPRING
15	-	SHAFT
16	-	E-RING
17	22E22060	UPPER ROLLER
18	19N415	TRANSFER/DETACK COROTRON ASSEMBLY (REP 9.2)



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PL 2.1 DRIVES AND MID-FRAME COMPONENTS

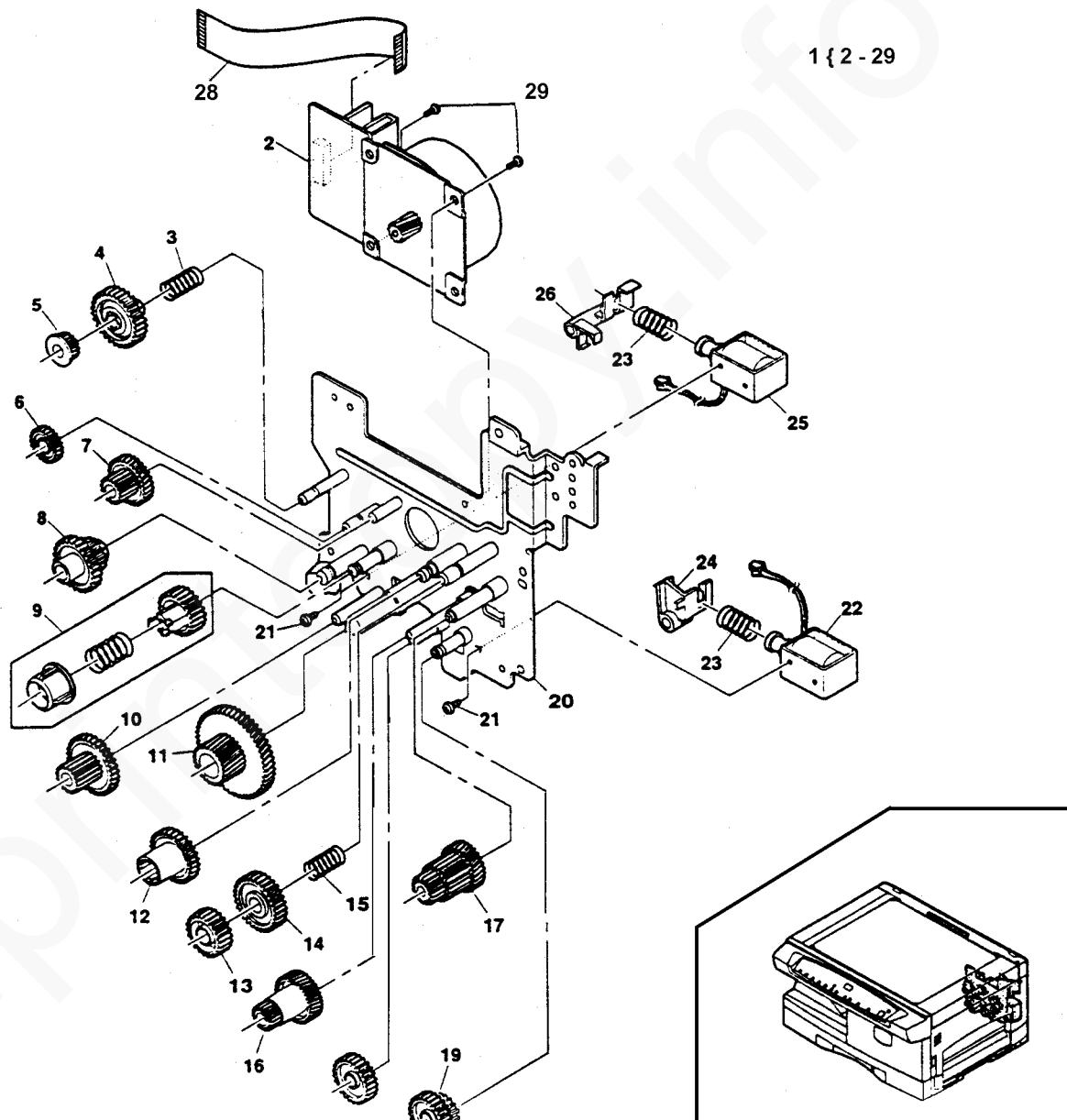
Item	Part	Description
1	22N926	EXIT ROLLER (REP 8.9)
2	-	BEARING
3	22N925	LOWER TRANSPORT ROLLER (REP 8.11)
4	20N449	PULLEY (22T)
5	23N596	EXIT DRIVE BELT
6	-	CABLE TIE
7	-	COUPLING
8	-	SPRING
9	127N972	TONER MOTOR (MOT 4) (REP 9.1)
10	-	SCREW (3X10)
11	-	SCREW (3X30)
12	127N971	VENTILATION FAN (MOT 3) (REP 10.6)
13	-	TRANSFER COROTRON CONTACT HOUSING
14	-	BIAS CONTROL PLATE
15	-	SCREW (3X6)
16	-	TRANSFER COROTRON PLATE
17	-	SCREW (3X6)
18	152N1634	BIAS CONTROL HARNESS
19	152N1636	TRANSFER COROTRON HARNESS
20	23N597	MANUAL EXIT DRIVE BELT (REP 8.10)
21	-	CENTER FRAME
22	3N675	MANUAL EXIT KNOB
23	152N1626	FUSER JAM SENSOR HARNESS
24	152N1623	FUSER HEAT ROD HARNESS (100V) (230V)
-	152N1660	HARNESS GUIDE
25	-	GUIDE PIN
26	-	DVS HARNESS
27	152N1627	SCREW (3X6)
28	-	SCREW (3X8)
29	-	SCREW (4X12)



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PL 2.2 MAIN DRIVES ASSEMBLY

Item	Part	Description
1	5N602	MAIN DRIVE ASSEMBLY (REP 8.12)
2	127N969	MAIN DRIVE MOTOR (MOT 1) (REP 4.1)
3	-	SPRING
4	-	GEAR
5	-	PULLEY
6	7N705	GEAR (28T)
7	7N704	GEAR (46/16T)
8	7N708	GEAR (30/15T)
9	7N701	DRIVE GEAR ASSEMBLY
10	7N709	GEAR (37/15T)
11	7N702	GEAR (68/26T)
12	7N710	COUPLING GEAR (34T)
13	7N713	RATCHET GEAR (21T)
14	7N712	RATCHET GEAR (28T)
15	-	SPRING
16	7N703	GEAR (55/19T)
17	7N711	GEAR (33/20/15T)
18	7N706	GEAR (20T)
19	7N707	GEAR (31/17T)
20	-	MAIN DRIVE BRACKET
21	-	SCREW (3X4)
22	121N400	PAPER FEED SOLENOID (SOL 1) (REP 8.1)
23	-	SPRING
24	-	PAWL
25	121N401	REGISTRATION ROLL SOLENOID (SOL 3) (REP 8.2)
26	-	PAWL
27	-	SCREW (3X10)
28	152N1633	MAIN MOTOR HARNESS
29	-	SCREW (4X6)



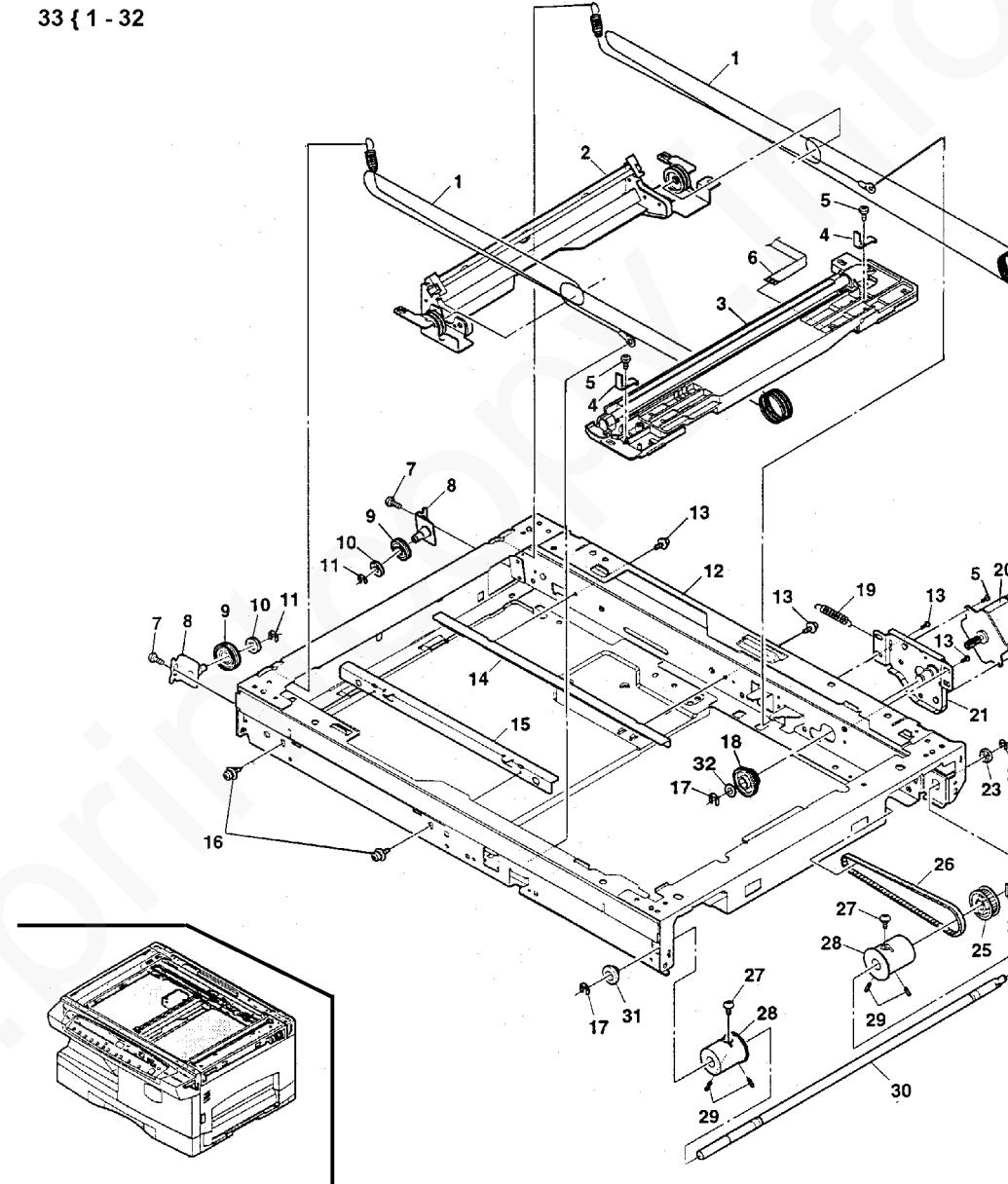
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PL 3.1 OPTICS FRAME (1 OF 2)

Item	Part	Description
1	12N105	SCAN CABLE
2	-	HALF RATE CARRIAGE ASSEMBLY
3	62N139	EXPOSURE LAMP CARRIAGE (REP 6.2)
4	-	CABLE CLAMP
5	-	SCREW (3X5)
6	152N1631	EXPOSURE LAMP HARNESS
7	-	SCREW
8	-	PULLEY STUD PLATE
9	-	PULLEY
10	-	PULLEY
11	-	E-RING
12	-	OPTICS FRAME
13	-	SCREW (3X8)
14	-	SCAN RAIL (REAR)
15	-	SCAN RAIL (FRONT)
16	-	SCREW
17	-	E-RING
18	7N694	SCAN DRIVE GEAR/PULLEY
19	-	MOTOR TENSION SPRING
20	127N970	SCAN DRIVE MOTOR (MOT 2) (REP 6.3)
21	-	SCAN DRIVE MOTOR MOUNTING PLATE
22	-	E-RING
23	-	BEARING
24	-	SPRING PIN (3MM)
25	-	SCAN DRIVE PULLEY
26	64N25	SCAN DRIVE BELT
27	-	SCREW (3X4)
28	-	SCAN CABLE HUB
29	-	SCREW (4X6)
30	-	SCAN CABLE DRIVE SHAFT
31	-	BEARING
32	-	WASHER
33	-	OPTICS FRAME ASSEMBLY (REP 6.6)

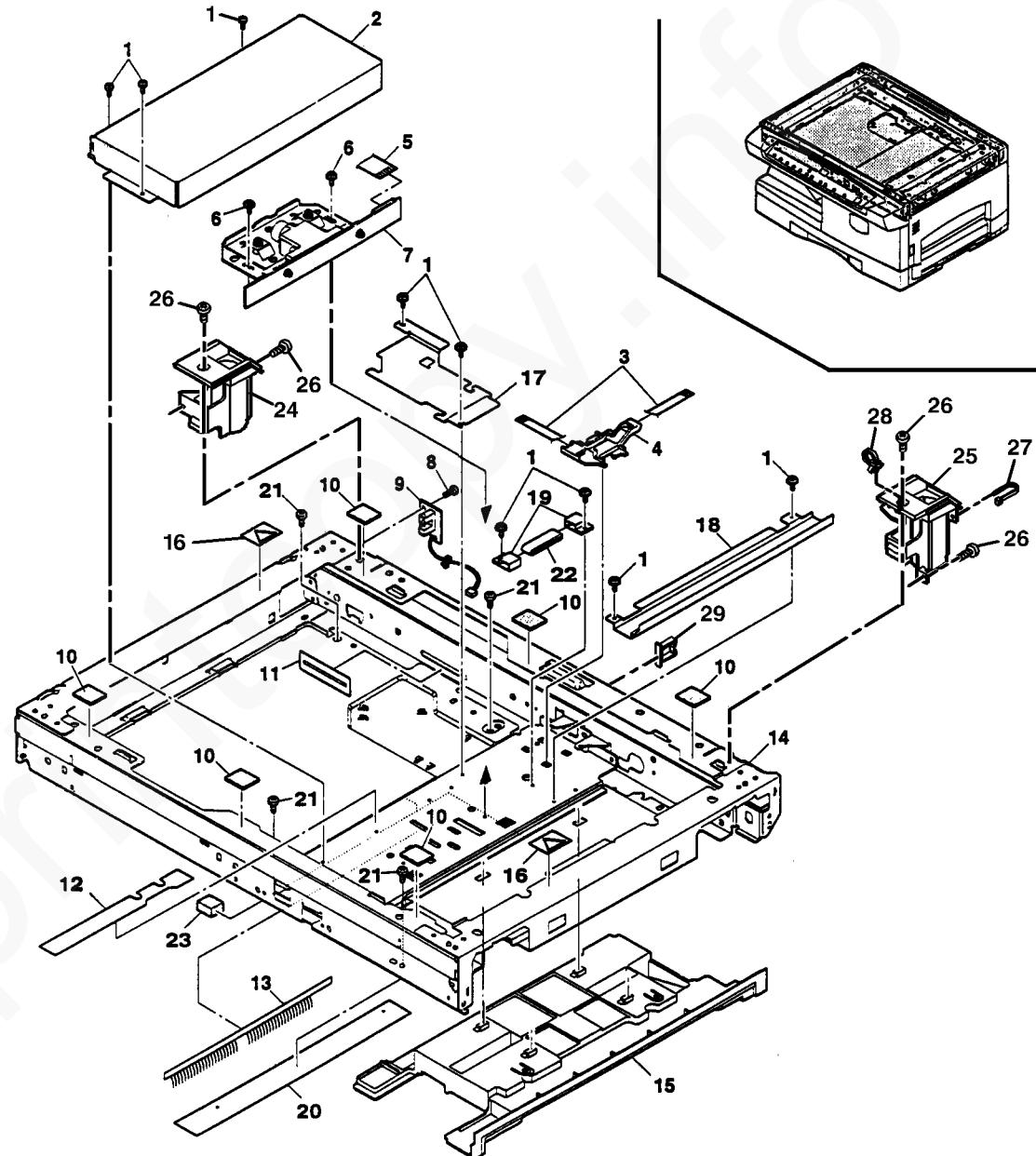
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PL 3.2 OPTICS FRAME (XD120F) (2 OF 2)

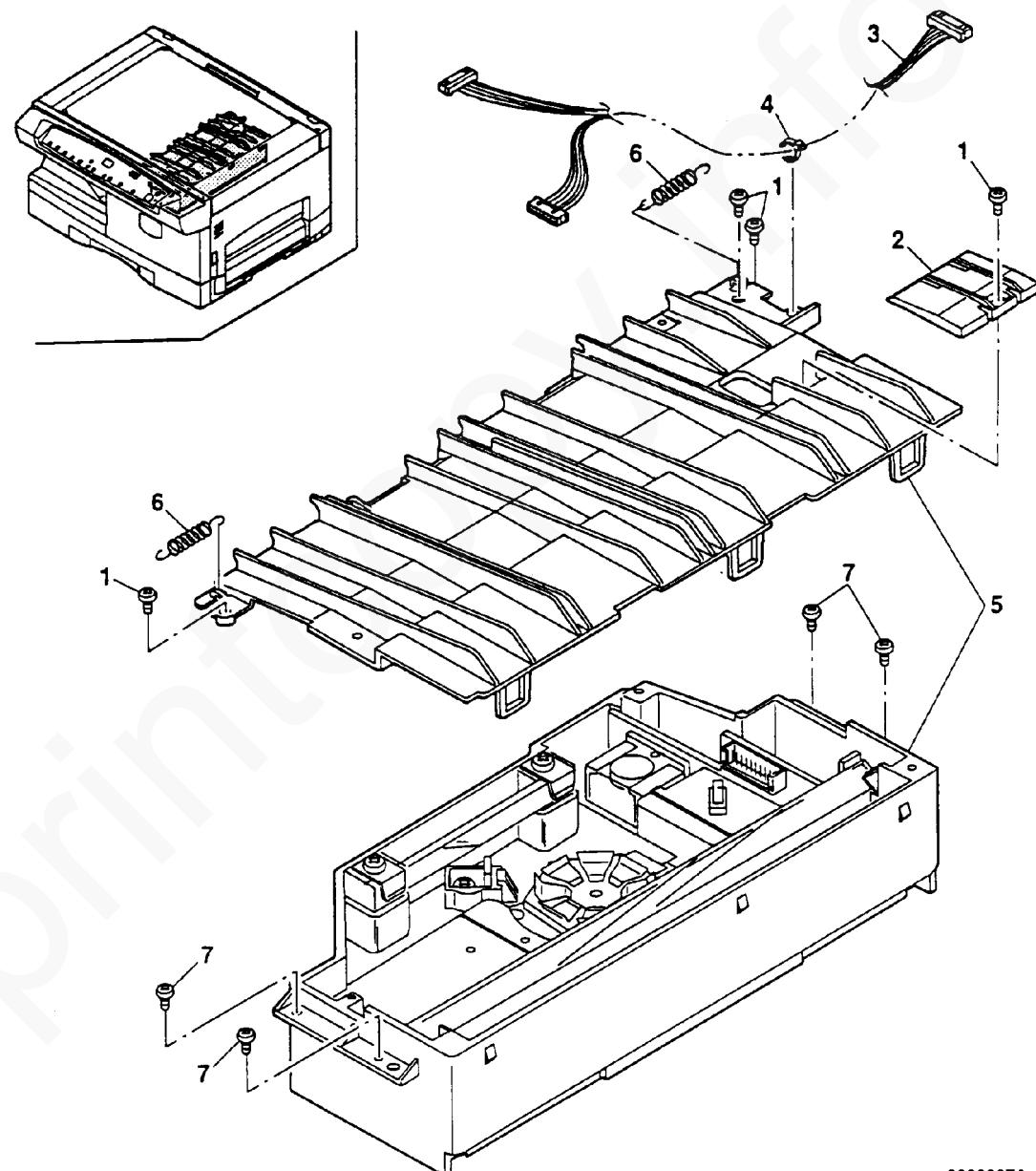
Item	Part	Description
1	-	SCREW (3X8)
2	-	LENS COVER
3	152N1631	EXPOSURE LAMP HARNESS
4	-	HARNESS GUIDE
5	152N1632	CCD HARNESS
6	-	SCREW
7	62N141	LENS/CCD MODULE (REP 6.5)
8	-	SCREW (3X8)
9	140N5112	SCAN HOME SENSOR (Q5)
10	-	DOCUMENT GLASS CUSHION
11	-	RIBBON GUIDE
12	-	PROTECTOR SHEET
13	115N273	DISCHARGE BRUSH
14	-	OPTICS FRAME GUIDE
15	-	UPPER DUPLEX PAPER GUIDE
16	96E90830	CAUTION LABEL
17	-	CCD HARNESS COVER
18	-	CCD PWB COVER
19	-	FERRITE HOLDER
20	-	LOWER SHEET
21	-	SCREW (4X12)
22	-	FERRITE
23	-	CUSHION
24	3N684	SDF LEFT HINGE GUIDE (XD120F)
25	3N685	SDF RIGHT HINGE GUIDE (XD120F)
26	-	SCREW (3X8) (XD120F)
27	-	WIRE BAND (XD120F)
28	-	BAND (PLT1M) (XD120F)
29	-	WIRE HOLDER (LWS-1M) (XD120F)



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PL 3.3 LASER ASSEMBLY

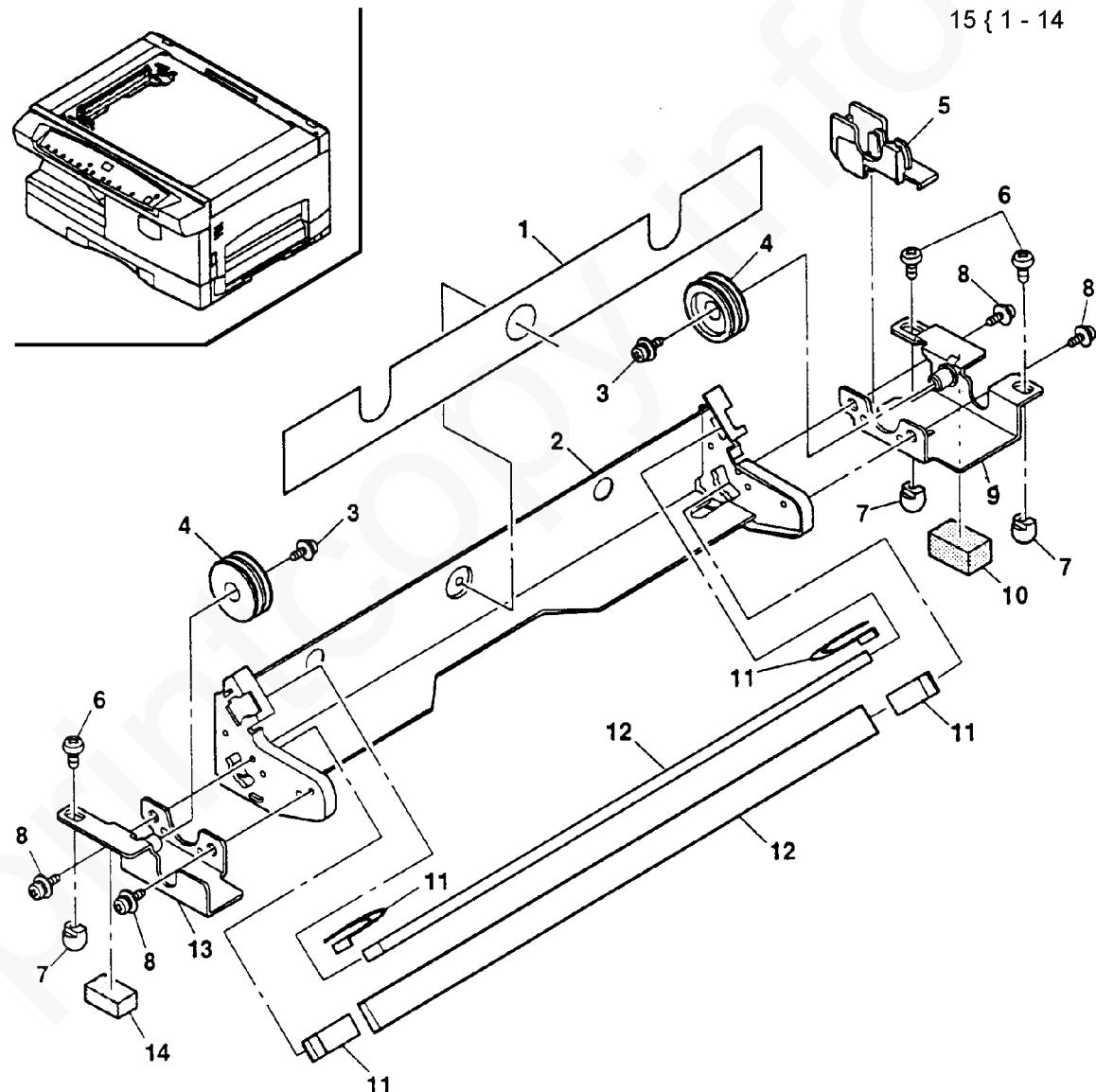
Item	Part	Description
1	-	SCREW (3X6)
2	-	LASER HARNESS COVER
3	152N1628	LASER HARNESS
4	-	TIE WRAP
5	62N142	LASER MODULE (REP 6.4)
6	-	SPRING
7	-	SCREW



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PL 3.4 HALF RATE CARRIAGE ASSEMBLY

Item	Part	Description
1	-	LIGHT SHIELD
2	-	HALF RATE CARRIAGE
3	-	SCREW (4X6)
4	-	PULLEY
5	-	GUIDE
6	-	SCREW (4X6)
7	10N64	SLIDE BUTTON
8	-	SCREW
9	-	PULLEY BRACKET (REAR)
10	4N188	CUSHION (REAR)
11	19E26730	MIRROR CLIP
12	62N140	MIRROR
13	-	PULLEY BRACKET (FRONT)
14	4E8450	CUSHION (FRONT)
15	-	HALF RATE CARRIAGE ASSEMBLY

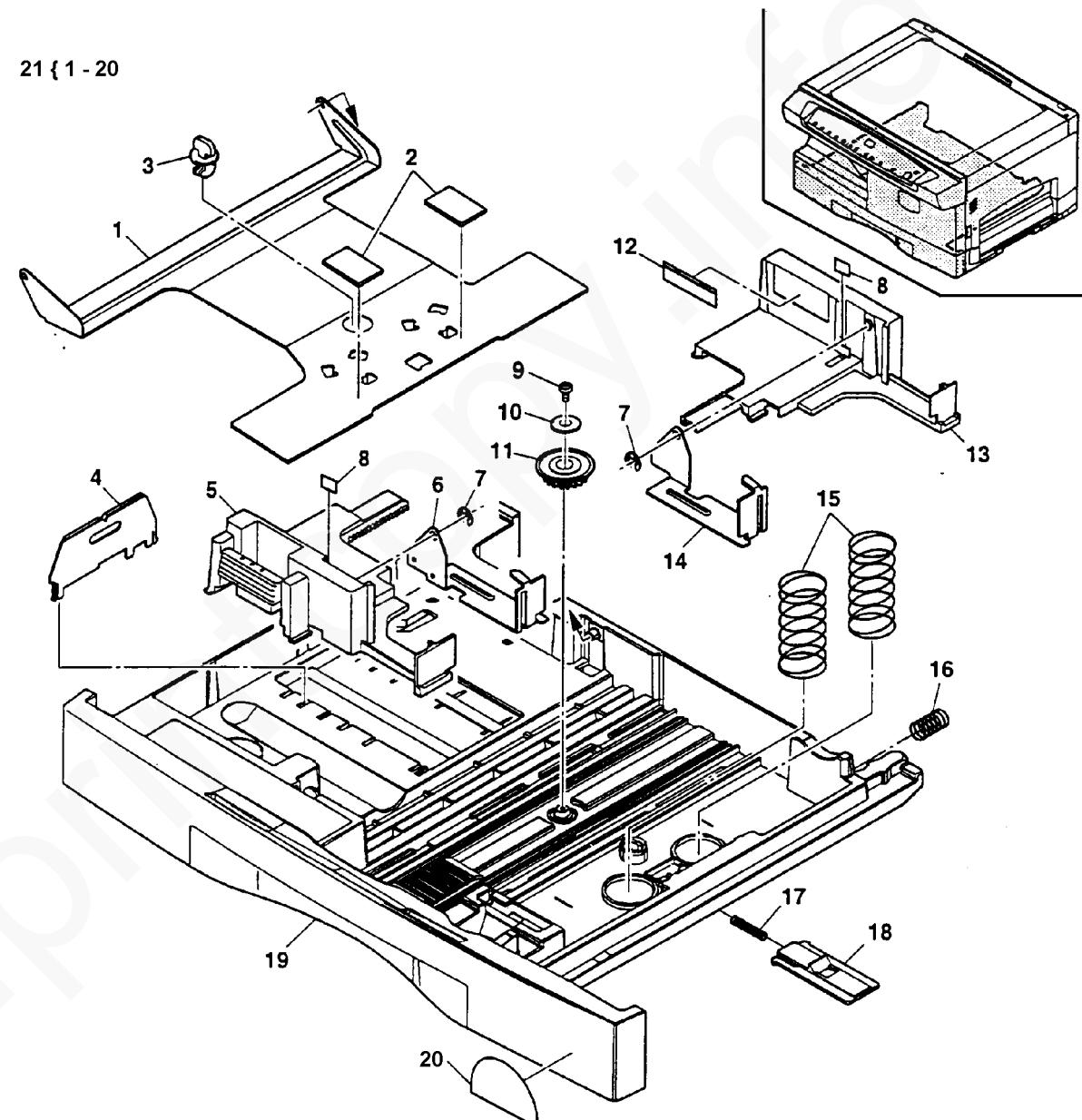


15 { 1 - 14

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PL 4.1 250 SHEET TRAY

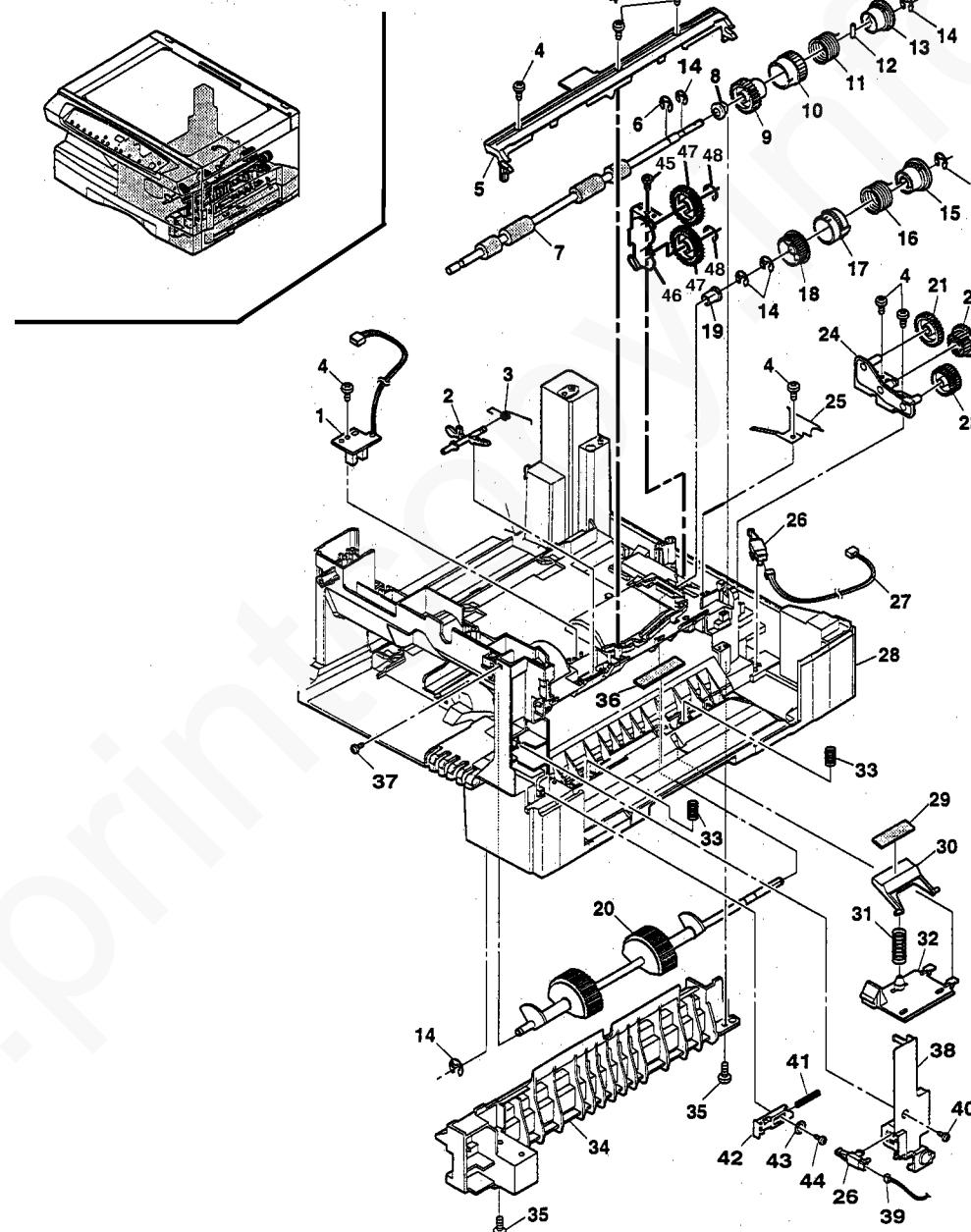
Item	Part	Description
1	-	PAPER PRESSURE PLATE
2	19E37760	RETARD PAD
3	120E10520	PRESSURE PLATE LOCK
4	3E26060	PAPER SIZE GUIDE
5	-	FRONT PAPER GUIDE
6	19E37850	FRONT PAPER SNUBBER
7	-	E-RING
8	-	LABEL
9	-	SCREW (3X8)
10	-	WASHER
11	-	GEAR
12	-	LOAD LABEL
13	-	REAR PAPER GUIDE
14	19E37840	REAR PAPER SNUBBER
15	809E24950	LIFT SPRING
16	-	TRAY SPRING
17	-	SPRING
18	-	PLATE RELEASE
19	-	TRAY FRAME
20	-	LABEL
21	50N233	250 SHEET PAPER TRAY



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PL 5.1 PAPER FEEDING AND DRIVES (XD100/102/104)

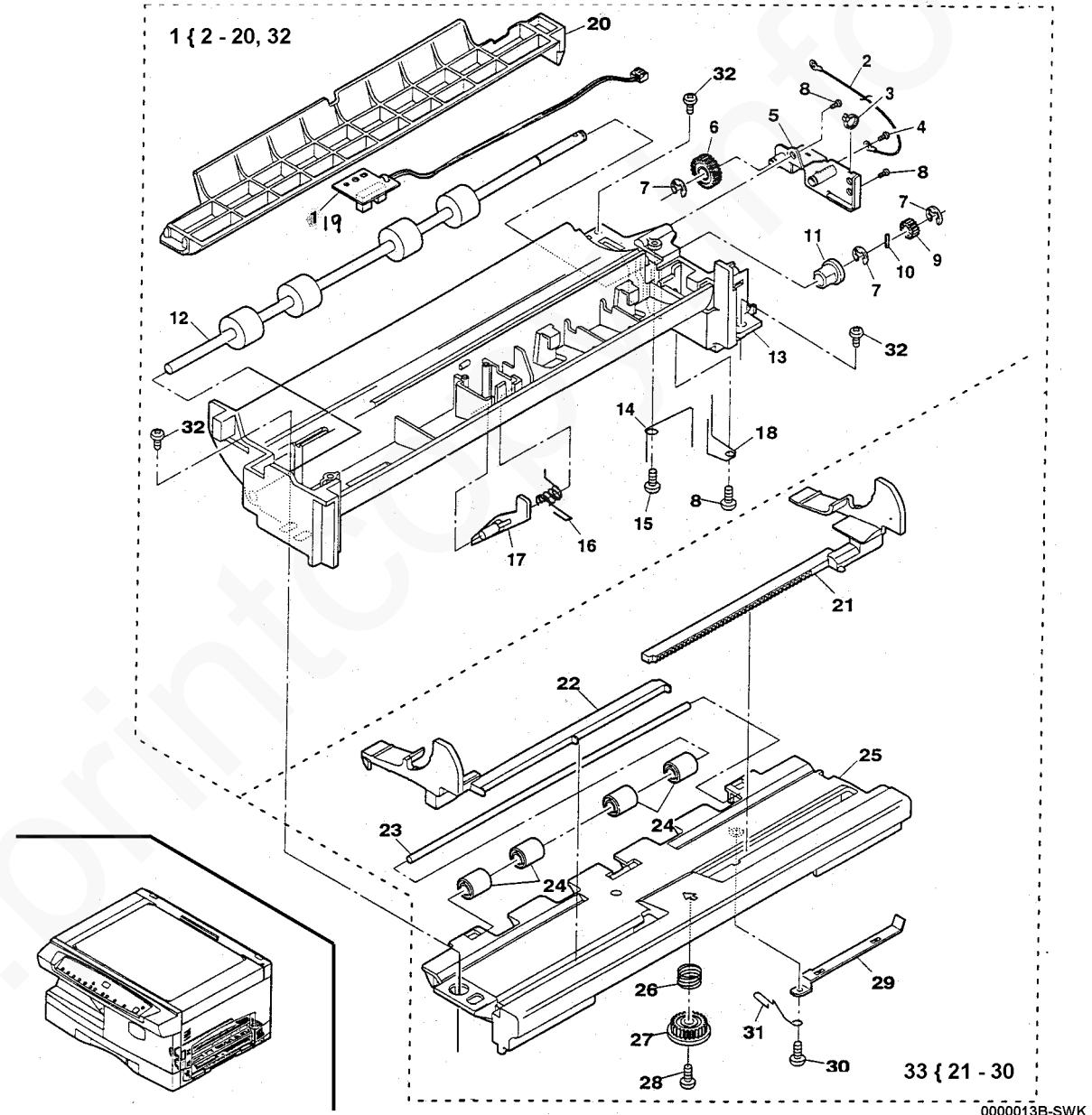
Item	Part	Description
1	140N5109	PAPER FEED SENSOR (Q1) (REP 8.3)
2	120N276	SENSOR ACTUATOR
3	-	ACTUATOR SPRING
4	-	SCREW (3X10)
5	-	UPPER FRONT PAPER GUIDE
6	-	E-RING
7	22N929	LOWER REGISTRATION ROLLER (REP 8.13)
8	-	BEARING
9	-	CLUTCH GEAR (26T)
10	5E9640	CLUTCH SLEEVE
11	-	CLUTCH SPRING
12	-	SPRING PIN
13	-	CLUTCH BOSS
14	-	E-RING
15	5E4260	CLUTCH BOSS
16	9E17190	CLUTCH SPRING
17	16N174	CLUTCH SLEEVE
18	7E47590	CLUTCH GEAR (29T)
19	13E12330	BEARING
20	22N928	PAPER FEED ROLLER (REP 8.6)
21	7N698	GEAR (33T)
22	7N700	GEAR (21/29T)
23	7N699	GEAR (30T)
24	-	GEAR SUPPORT BRACKET
25	-	GROUNDING PLATE
26	110N817	TRAY DETECT SWITCH (S2) (REP 8.14) DRUM RESET SWITCH (S6)
27	152N1638	TRAY DETECT SWITCH HARNESS (REP 8.5)
28	-	BASE FRAME
29	19E15900	RETARD PAD
30	-	RETARD ARM
31	-	LIFT SPRING
32	-	RETARD SUPPORT PLATE
33	-	SPRING (XD100/102)
34	-	PAPER GUIDE
35	-	SCREW (4X12)
36	38E13480	RETARD PAD (XD104)
37	-	SCREW (3X8)
38	-	SENSOR COVER
39	152N1637	D-RST HARNESS
40	-	SCREW (3X12)
41	9N970	FRONT LEVER SPRING
42	3N674	FRONT LEVER PLATE
43	-	WASHER
44	-	SCREW (3X10)
45	-	SCREW (4X12) (XD120F)
46	15N289	FIXING PLATE (XD120F)
47	7E47680	JOINT GEAR (XD120F)
48	-	E-RING (XD120F)



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PL 5.2 SINGLE BYPASS (XD100/102)

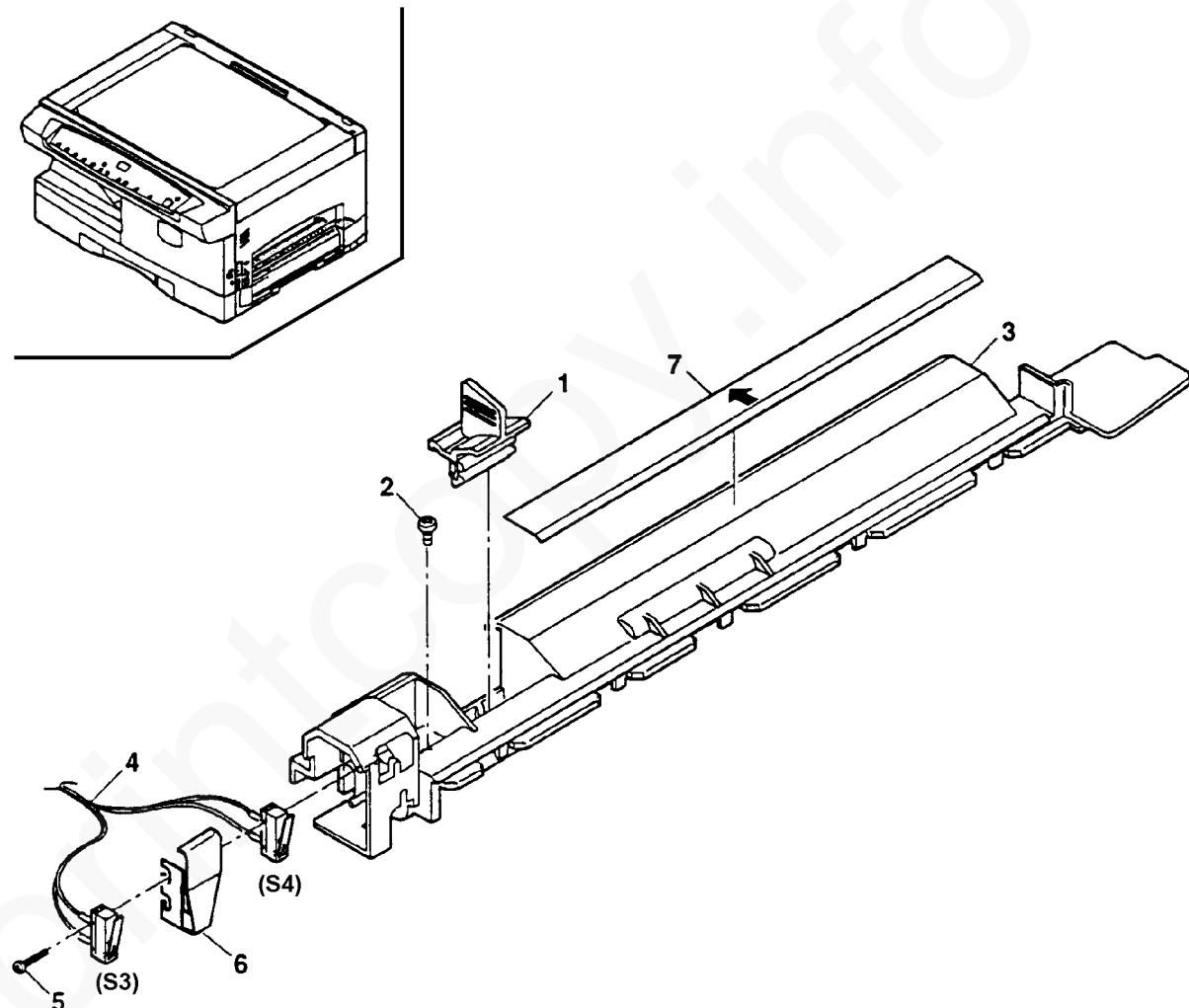
Item	Part	Description
1	22N933	SINGLE BYPASS ASSEMBLY
2	-	GROUND WIRE
3	-	TIE WRAP
4	-	SCREW (3X6)
5	-	PAPER FEED BRACKET
6	-	GEAR (27T)
7	-	E-RING
8	-	SCREW 3X8)
9	-	GEAR (16T)
10	-	SPRING PIN
11	-	BUSHING
12	22N932	TRANSPORT ROLLER (REP 8.7)
13	-	BYPASS FRAME
14	-	GROUNDING SPRING
15	-	SCREW (3X6)
16	-	ACTUATOR SPRING
17	120N277	ACTUATOR
18	-	SPRING
19	140N5106	BYPASS FEED SENSOR (Q2) (REP 8.4)
20	-	DUPLEX UPPER GUIDE
21	-	SINGLE BYPASS GUIDE (R)
22	-	SINGLE BYPASS GUIDE (F)
23	-	SCREW (3X6)
24	22E22060	BYPASS ROLL
25	-	SINGLE BYPASS FRAME
26	-	SPRING
27	-	PAPER FEED GEAR
28	-	SCREW (3X6)
29	-	GROUNDING SPRING
30	-	SCREW (3X6)
31	-	GROUNDING SPRING
32	-	SCREW (4X12)
33	22N930	SINGLE BYPASS UPPER ASSEMBLY



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PL 5.3 SINGLE BYPASS COVER (XD100/102)

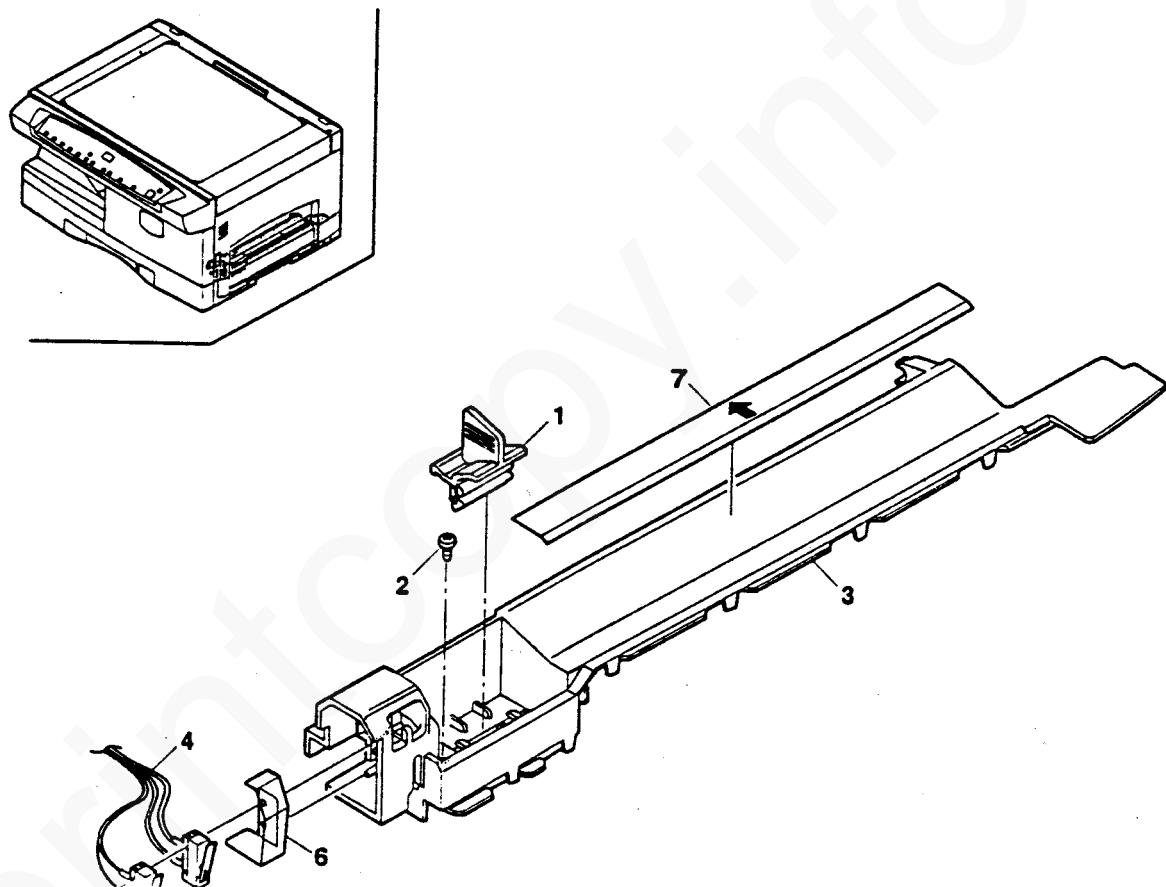
Item	Part	Description
1	42E1430	COROTRON CLEANER
2	-	SCREW
3	-	UPPER COVER
4	110N783	SIDE DOOR INTERLOCK SWITCH (S3/S4) (24V/5V) (REP 8.8)
5	-	SCREW (2X16)
6	-	SWITCH ACTUATOR
7	-	CAUTION LABEL (XL)



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**PL 5.4 MULTISHEET BYPASS COVER
(XD104)**

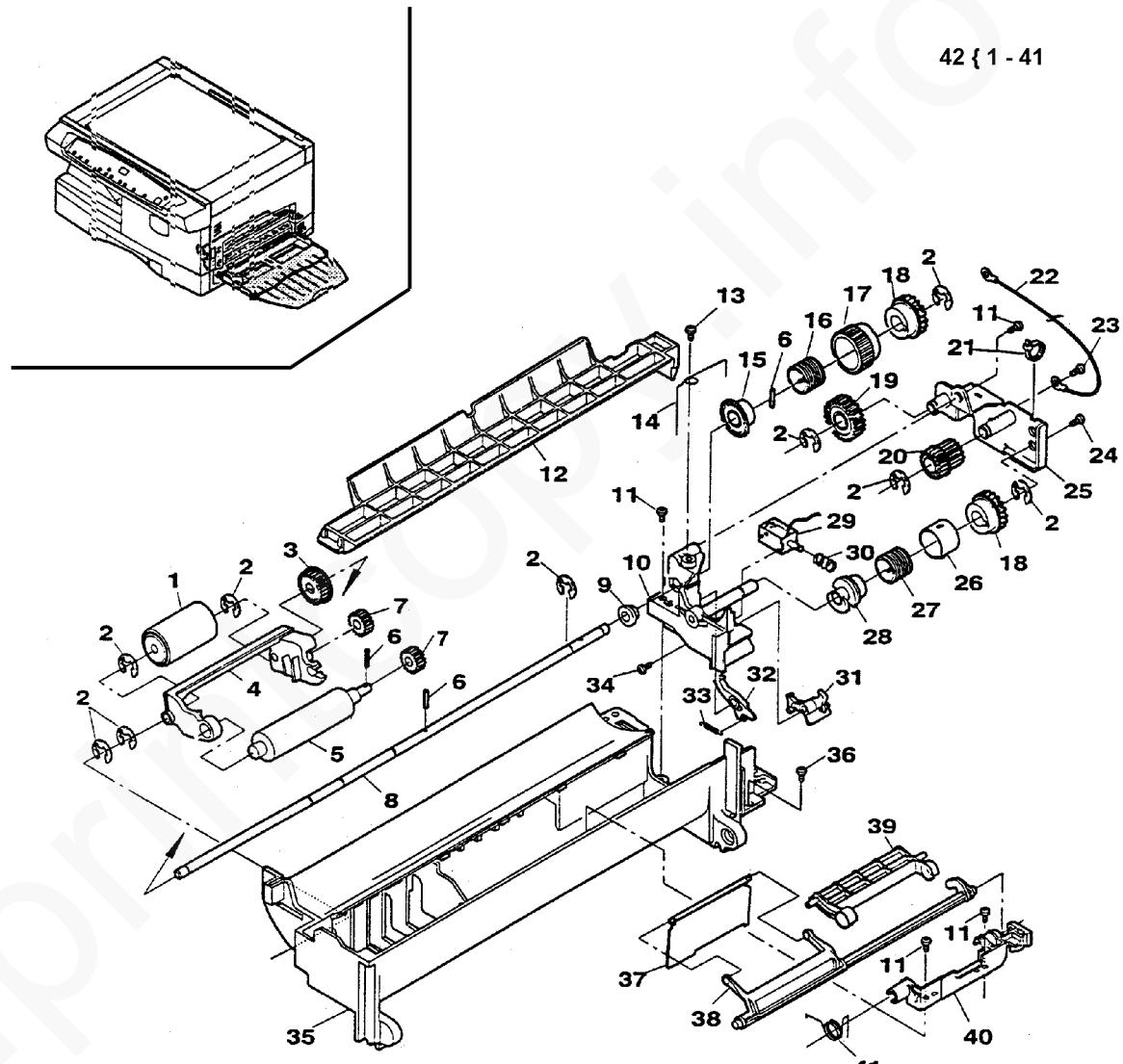
Item	Part	Description
1	42E1430	COROTRON CLEANER
2	-	SCREW
3	-	UPPER COVER
4	110N783	SIDE DOOR INTERLOCK SWITCH (S3/S4) (24V/5V) (REP 8.8)
5	-	SCREW (2X16)
6	-	SWITCH ACTUATOR
7	-	CAUTION LABEL (XL)



0000026A-SKW

PL 5.5 MULTISHEET BYPASS FEEDER (XD104)

Item	Part	Description
1	5E10560	FEED ROLL (REP 8.15)
2	-	E-RING
3	-	GEAR (20T)
4	-	ROLL SUPPORT
5	22E20680	RETARD ROLL (REP 8.16)
6	-	SPRING PIN
7	-	GEAR (16T)
8	-	SHAFT
9	-	BUSHING
10	-	SUPPORT
11	-	SCREW (3X8)
12	-	UPPER GUIDE
13	-	SCREW (3X6)
14	-	GROUNDING SPRING
15	5E9560	CLUTCH BOSS
16	9E57550	FEED CLUTCH SPRING
17	5E9640	CLUTCH SLEEVE
18	5E9540	CLUTCH BOSS
19	-	GEAR (27T)
20	-	GEAR (20T)
21	-	TIE WRAP
22	-	GROUNDING WIRE
23	-	SCREW (3X6)
24	-	SCREW (3X6)
25	-	SUPPORT PLATE
26	-	CLUTCH SLEEVE
27	-	CLUTCH SPRING
28	-	CLUTCH BOSS
29	121N402	FEED SOLENOID (REP 8.17)
30	-	SOLENOID SPRING
31	-	RATCHET ARM
32	-	RATCHET ARM
33	-	SPRING
34	-	SCREW (3X8)
35	-	FRAME
36	-	SCREW (4X12)
37	-	GATE
38	-	SUPPORT FRAME
39	-	ARM
40	-	HINGE
41	-	SPRING
42	-	FEEDER ASSEMBLY



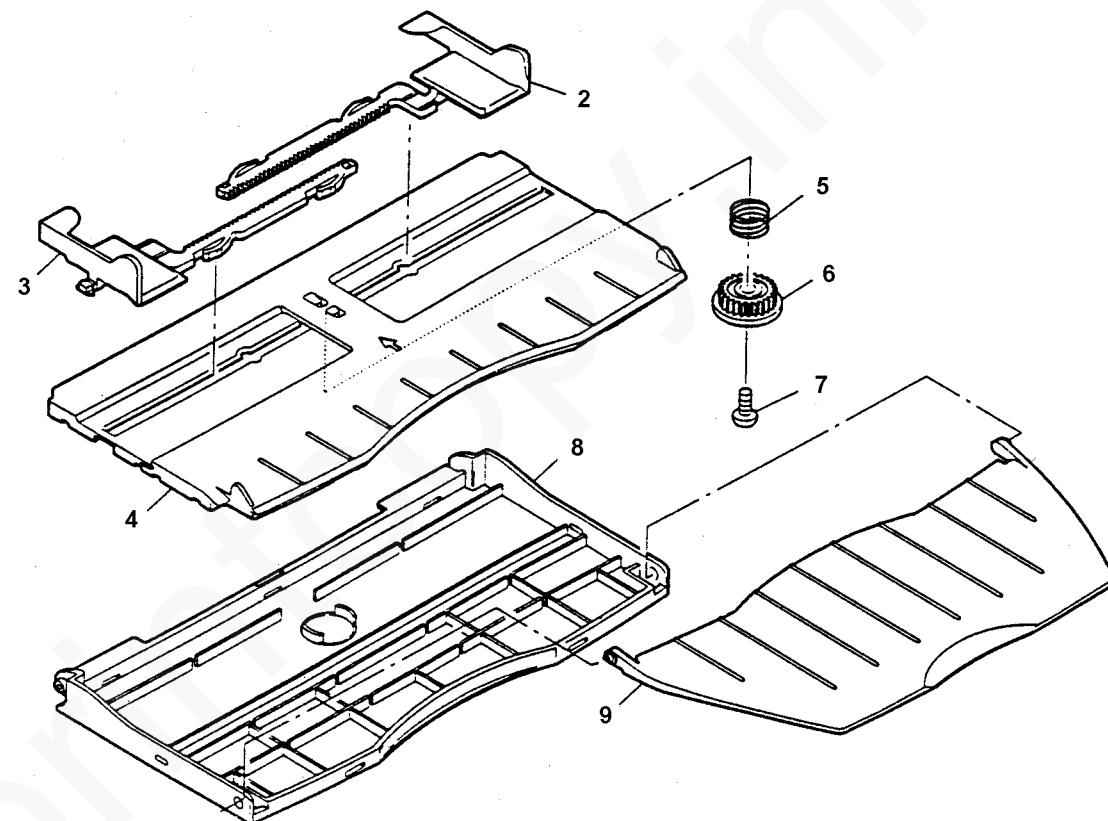
42 { 1 - 41

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**PL 5.6 MULTISHEET BYPASS TRAY
(XD104)**

Item	Part	Description
1	-	TRAY ASSEMBLY
2	-	REAR GUIDE
3	-	FRONT GUIDE
4	-	TRAY COVER
5	-	SPRING
6	-	GEAR
7	-	SCREW (3X6)
8	-	TRAY BASE
9	-	TRAY EXTENSION

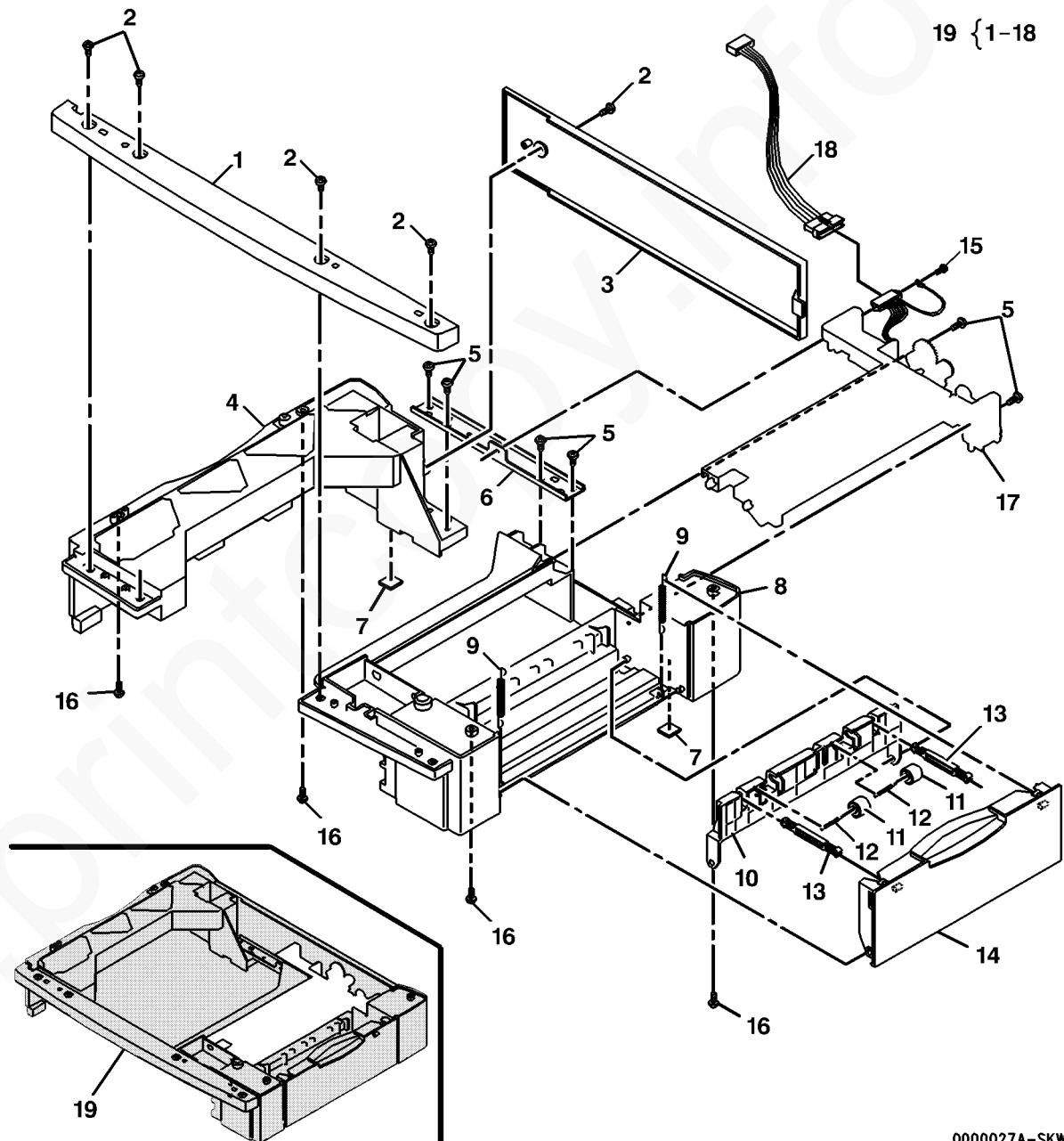
1 { 2 - 9



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**PL 5.7 TRAY 2 FRAME ASSEMBLY
(XD120F)**

Item	Part	Description
1	-	FRONT COVER
2	-	SCREW (4X12)
3	-	REAR COVER
4	-	LEFT TRAY GUIDE
5	-	SCREW (4X12)
6	-	REAR TIE PLATE
7	17E8540	RUBBER FOOT
8	-	RIGHT TRAY GUIDE
9	809E11980	TRANSPORT COVER SPRING
10	-	TRANSPORT COVER
11	22N970	IDLER ROLLER
12	9N1003	IDLER SPRING
13	31N159	ARM
14	-	LOWER SIDE DOOR
15	-	SCREW (4X8)
16	-	SCREW (3X16)
17	-	TRAY 2 FEED ASSEMBLY
18	152N1655	TRAY 2 HARNESS
19	50N256	250 CASSETTE ASSEMBLY

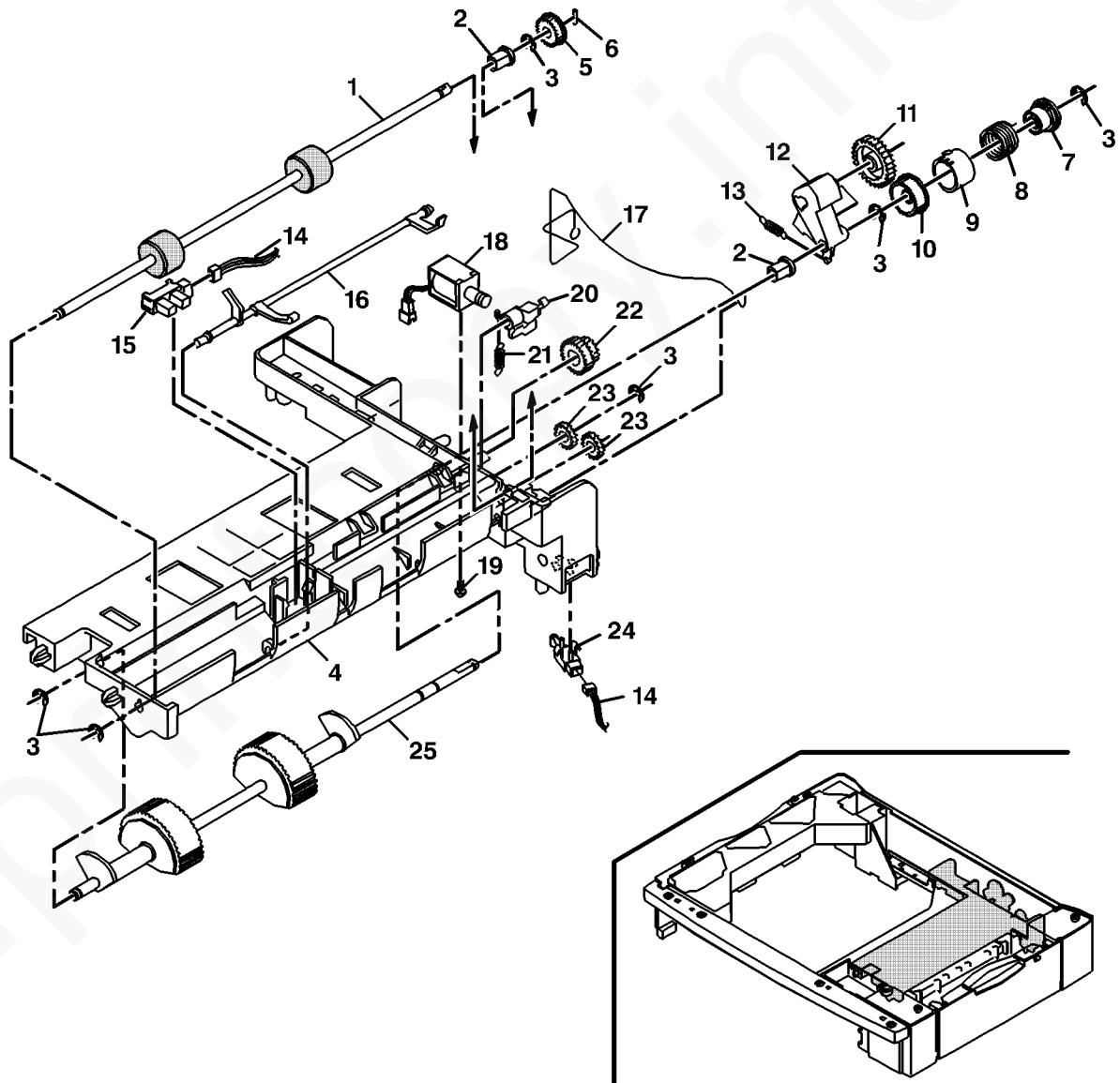


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**PL 5.8 TRAY 2 PAPER FEED
ASSEMBLY (XD120F)**

26 { 1-25

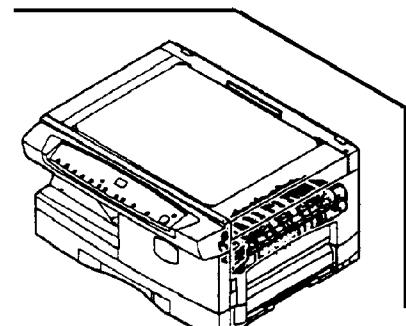
Item	Part	Description
1	22N980	TRAY 2 TRANSPORT ROLLER (REP 8.23)
2	13E12360	BEARING (B-F5-13)
3	-	E-RING
4	-	DRIVE FRAME
5	7E29480	GEAR (20T)
6	29N182	SPRING PIN
7	5E4260	CLUTCH BOSS
8	9E17190	CLUTCH SPRING
9	-	CLUTCH SLEEVE
10	7E47590	CLUTCH GEAR (29T) (REP 8.24)
11	7E47670	GEAR (40)
12	31E8940	ARM
13	809E12000	SPRING
14	-	TRAY 2 HARNESS
15	110E5370	TRAY 2 PAPER FEED SENSOR (Q7) (REP 8.20)
16	120N287	ACTUATOR
17	9N1016	GROUND SPRING
18	121N411	TRAY 2 PAPER FEED SOLENOID (SOL 2) (REP 8.22)
19	-	SCREW (3X6)
20	7N742	CLUTCH PAWL
21	809E12010	CLUTCH PAWL SPRING
22	7N743	GEAR (18/26T)
23	7E29490	GEAR (16T)
24	110N817	TRAY 2 DETECT SWITCH (S5) (REP 8.21)
25	22N928	TRAY 2 FEED ROLLER (REP 8.25)
26	-	TRAY 2 FEED ASSEMBLY



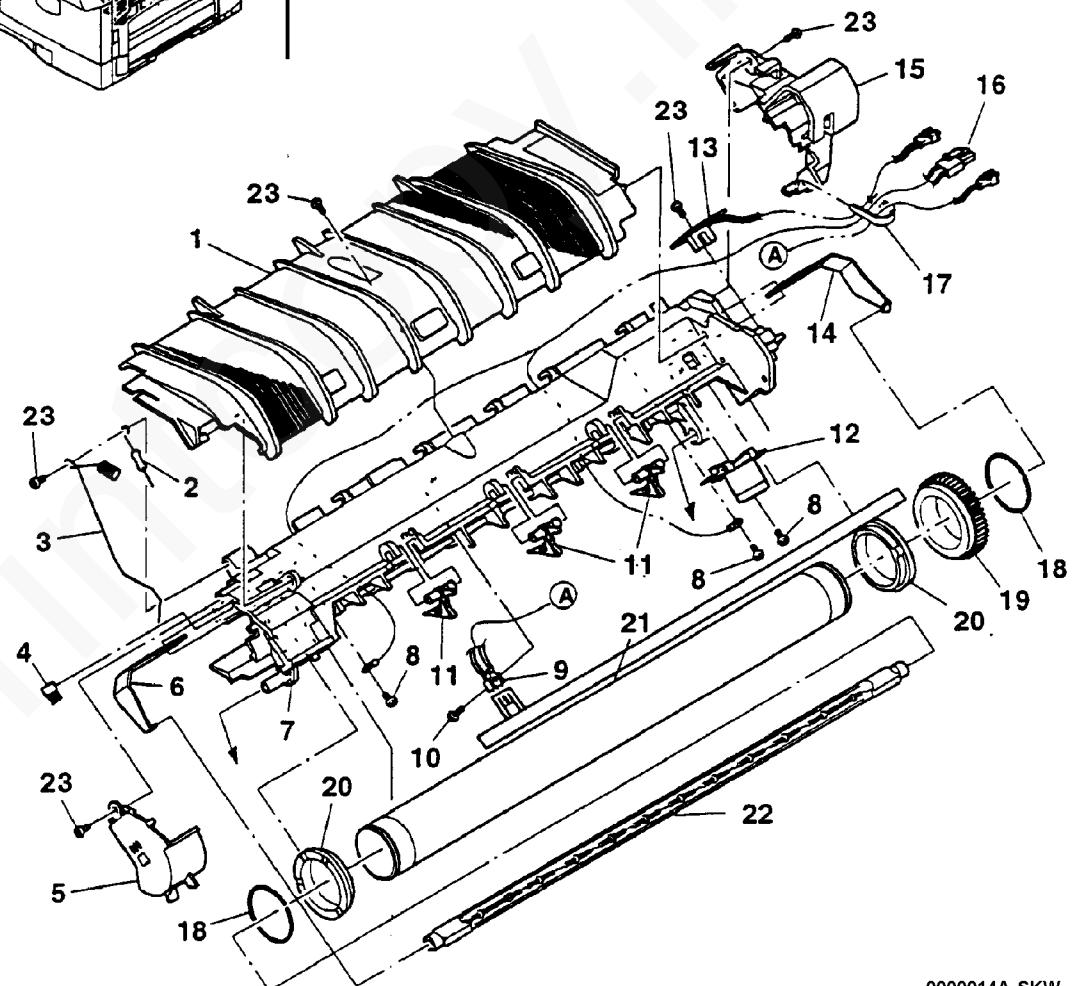
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PL 6.1 FUSING (1 OF 2)

Item	Part	Description
1	-	PAPER GUIDE (REP 10.10)
2	-	RESISTOR (1/2 W)
3	-	GROUND WIRE
4	-	DISCHARGE BRUSH
5	-	END COVER
6	-	HEAT ROD SPRING (F)
7	-	FUSER UPPER FRAME
8	-	SCREW (3X6)
9	130E7840	THERMISTOR (RT1) (REP 10.4)
10	-	SCREW (3X10)
11	7N695	STRIPPER FINGER (REP 10.11)
12	130E9190	THERMOSTAT (REP 10.9)
13	140N5110	FUSER JAM SENSOR (Q3) (REP 10.5)
14	-	HEAT ROD SPRING (R)
15	-	END COVER (R)
16	152N1624	FUSER ASSEMBLY HARNESS (100V)
-	152N1661	HARNESS (230V)
17	-	TIE WRAP
18	-	RETAINING RING
19	7E14961	DRIVE GEAR (45T)
20	13E12780	BEARING
21	22E23440	HEAT ROLL (REP 10.2)
22	122N115	HEAT ROD (120V) (REP 10.8)
-	122N133	HEAT ROD (230V) (REP 10.8)
23	-	SCREW
24	126N58	FUSER ASSEMBLY (120V) (REP 10.1)
-	126N70	FUSER ASSEMBLY (230V) (REP 10.1)



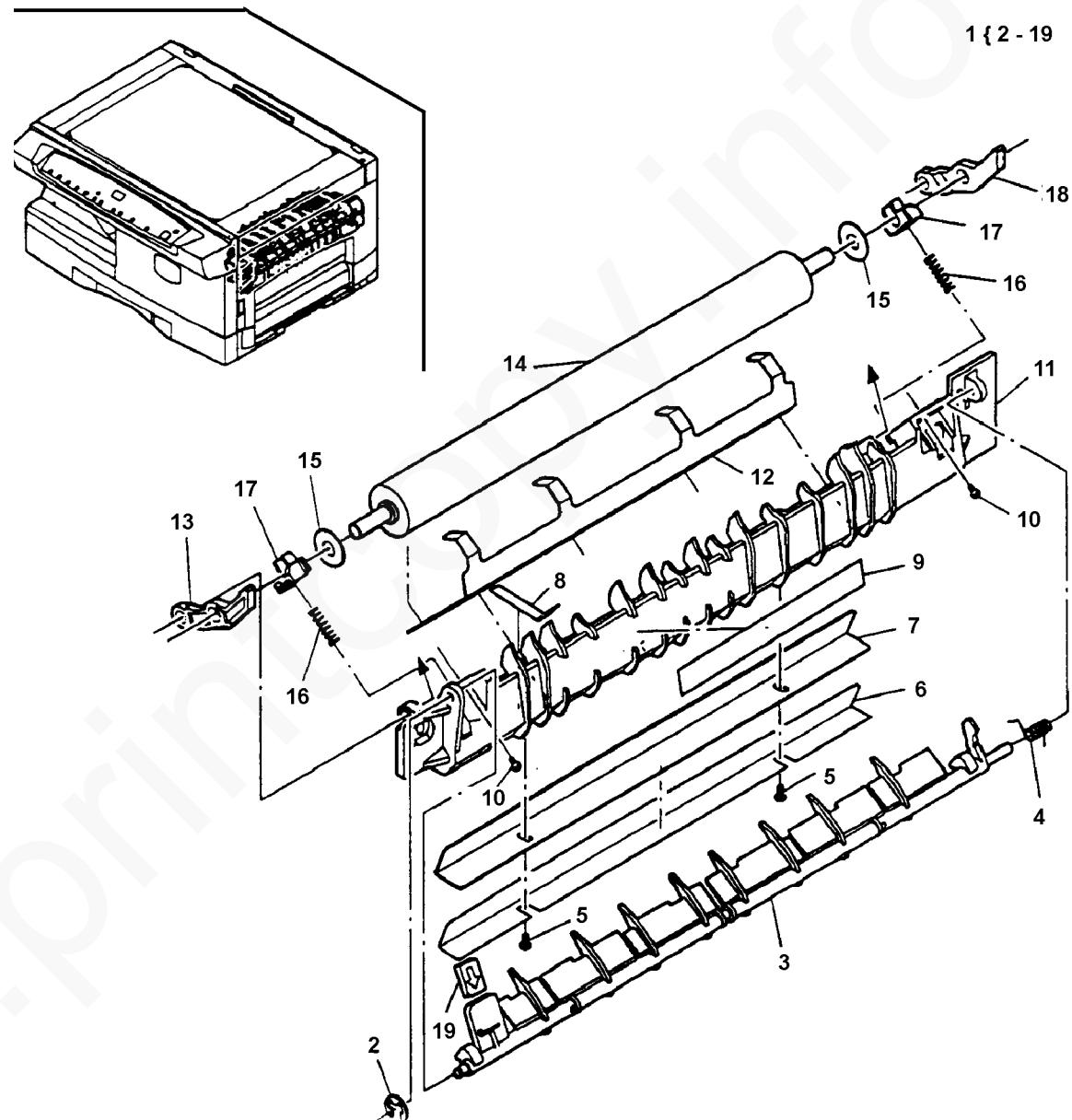
24 { 1 - 20, ITEM 1 ON PL6.2



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PL 6.2 FUSING (2 OF 2)

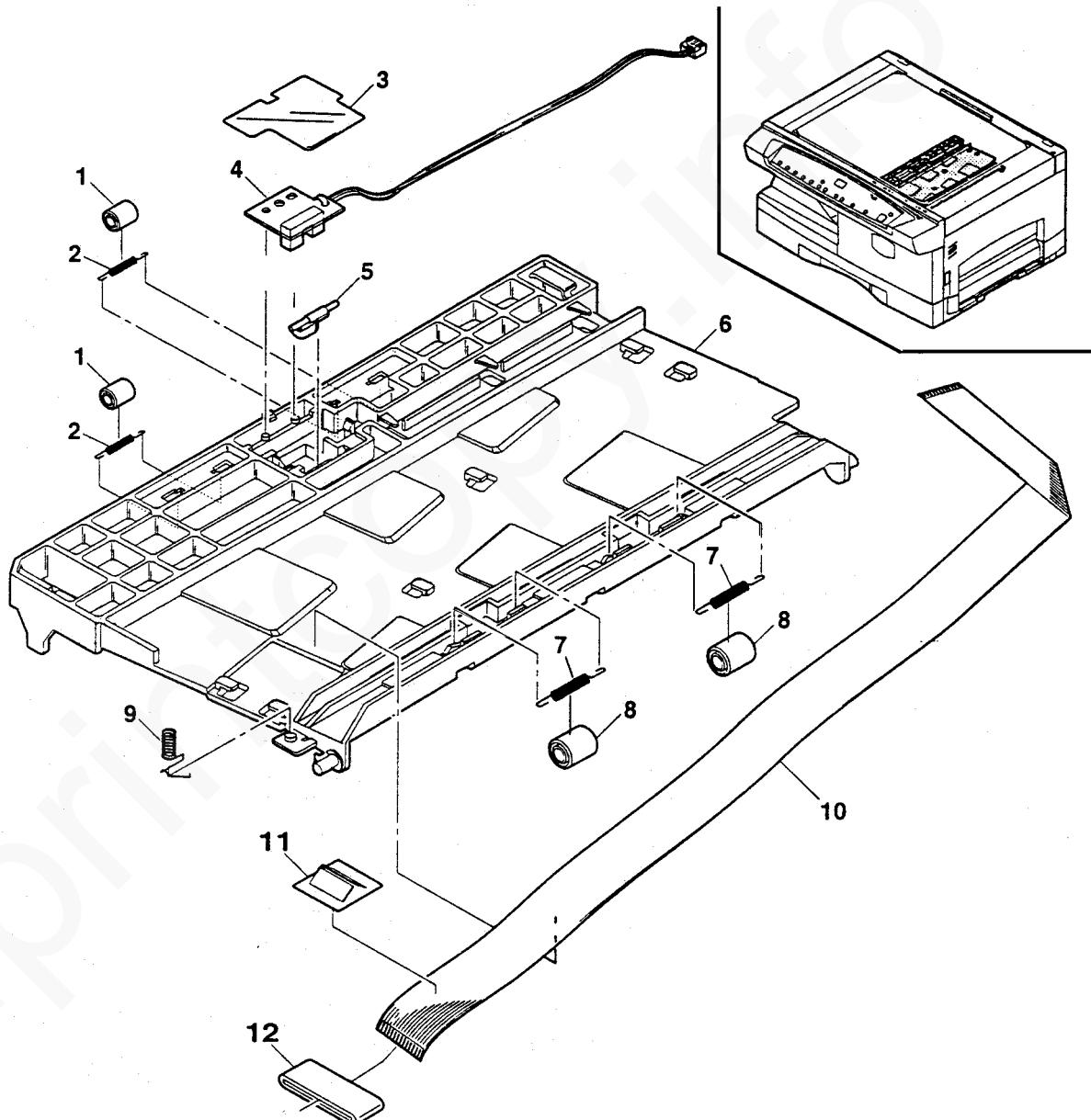
Item	Part	Description
1	-	FUSER ASSEMBLY (P/O PL 6.1)
		item 24)
2	-	E-RING
3	38N230	FUSER GATE (REP 10.12)
4	-	GATE SPRING
5	-	SCREW
6	-	FRONT PAPER GUIDE SHEET
7	-	FRONT PAPER GUIDE
8	-	GROUNDING STRAP
9	-	HIGH TEMP CAUTION LABEL
10	-	SCREW (3X12)
11	-	FUSER LOWER FRAME
12	33N169	PRESSURE ROLL STRIPPER FINGERS
13	-	PRESSURE ROLL ARM (F)
14	22N924	PRESSURE ROLL (REP 10.3)
15	-	WASHER
16	-	PRESSURE SPRING
17	-	PRESSURE ROLL BEARING
18	-	PRESSURE ROLL ARM (R)
19	-	HANDLE LABEL



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PL 6.3 OUTPUT TRANSPORT

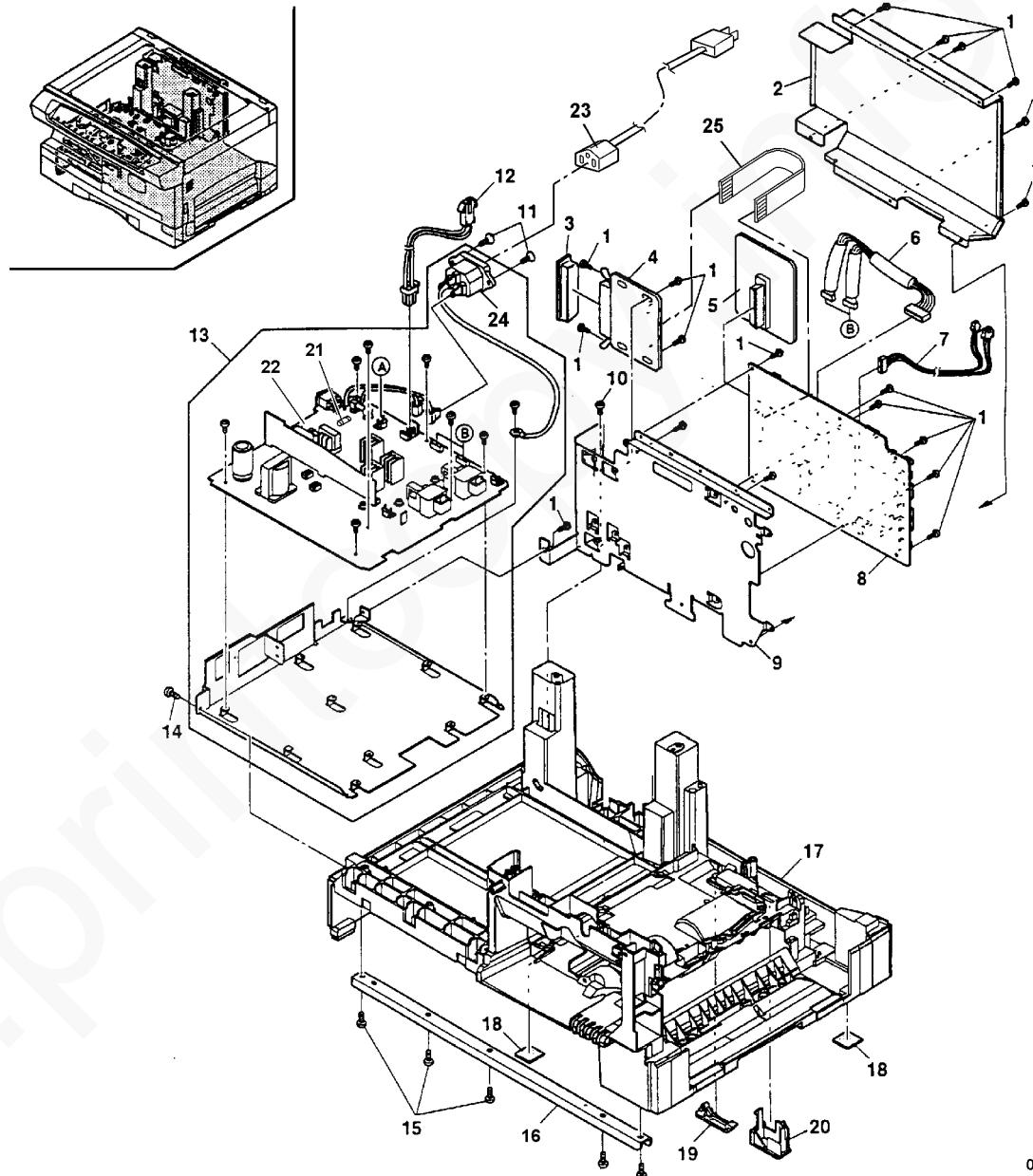
Item	Part	Description
1	22N927	UPPER EXIT ROLLER
2	9N966	TENSION SPRING
3	-	PWB INSULATOR
4	140N5111	EXIT SENSOR (Q4) (REP 10.7)
5	120N275	SENSOR ACTUATOR
6	-	EXIT GUIDE
7	9N965	TENSION SPRING
8	22E22060	UPPER ROLLER
9	-	GROUNDING SPRING
10	152N1630	CONTROL CONSOLE RIBBON CABLE
11	-	FERRITE RETAINER
12	-	FERRITE



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PL 7.1 ELECTRICAL COMPONENTS (XD120F)

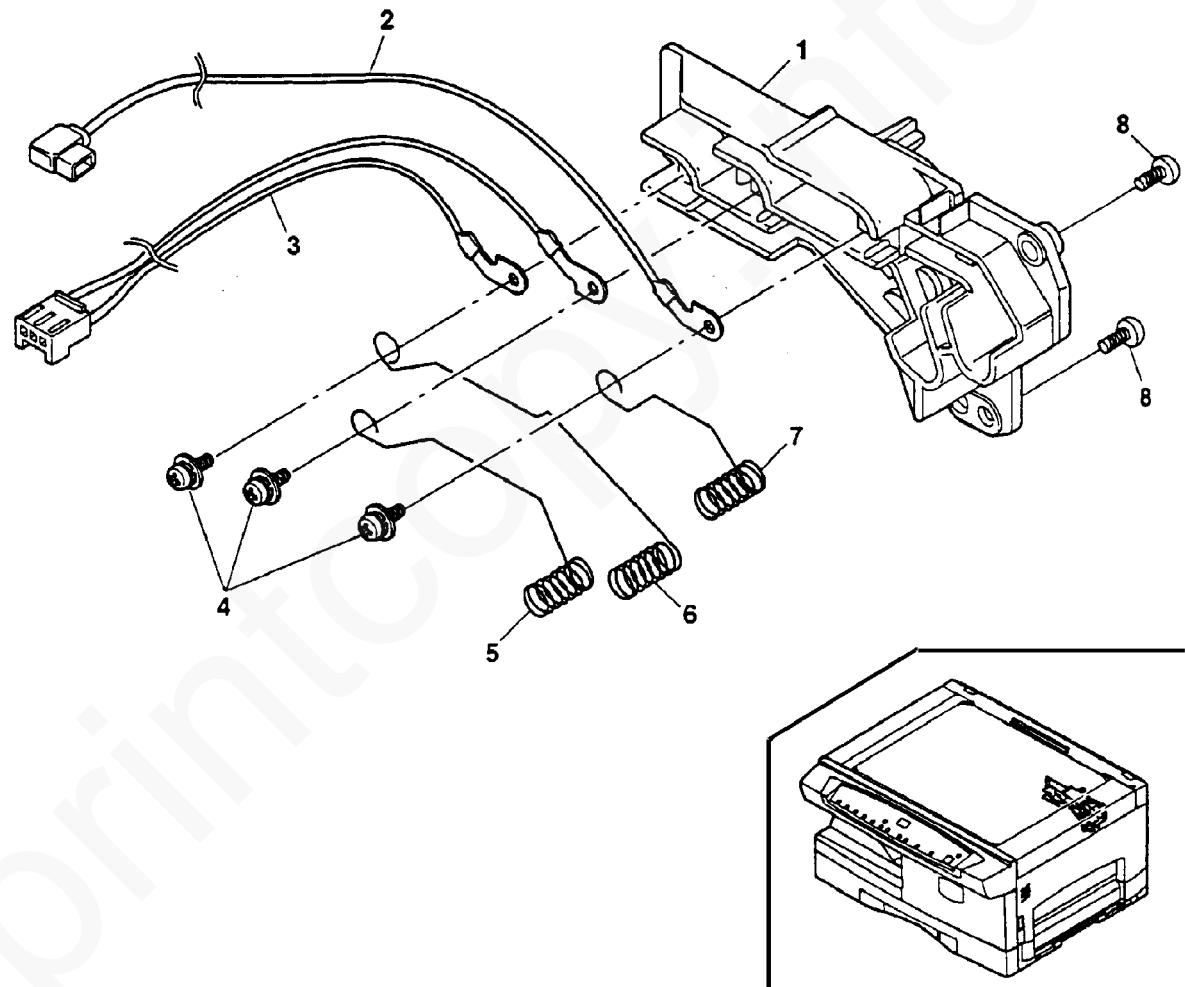
Item	Part	Description
1	-	SCREW (3X6)
2	-	PWB COVER
3	-	CONNECTOR CAP
4	140N5114	GDI PWB
5	140N5113	GDI MEMORY PWB
6	152N1629	CENTER FRAME HARNESS (100V)
-	152N1662	(230V)
7	152N1626	FUSER HARNESS
8	140N5116	MAIN PWB (10CPM) (REP 1.1)
-	140N5205	MAIN PWB (XD120F)
-	108N367	FUSE
9	-	PWB MOUNTING BRACKET
10	-	SCREW (3X10)
11	-	SCREW (3X10)
12	152N1623	FUSER HEAT ROD HARNESS (120V)
-	152N1660	(230V)
13	140N5115	POWER SUPPLY PWB (120V) (PS1) (REP 1.2)
-	140N5117	POWER SUPPLY PWB (230V) (PS1) (REP 1.2)
-	140N5207	POWER SUPPLY PWB (120V) (XD120F) (REP 1.2)
14	-	SCREW
15	-	SCREW (4X12)
16	-	STIFFENER BAR
17	-	BASE FRAME
18	-	RUBBER FOOT
19	-	2ND TRAY CONNECTOR COVER
20	-	2ND TRAY GEAR COVER
21	108E3660	FUSE (F1) (15A) (125V)
-	108E4370	FUSE (F1) (10A) (250V)
22	108N368	FUSE (F3) (5A) (125V)
-	108N369	FUSE (F3) (15A) (250V)
23	117E9750	POWER CORD (60HZ)
24	-	POWER RECEPTACLE (REP 1.4)
25	152N1652	GDI HARNESS



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PL 7.2 DRUM CARTRIDGE CONTACT HOUSING

Item	Part	Description
1	113N301	DRUM CARTRIDGE CONTACT HOUSING
2	152N1625	CHARGE COROTRON HARNESS
3	152N1622	GRID BIAS/MAIN PWB HARNESS
4	-	SCREW (3X6)
5	9N968	CONTACT SPRING
6	9N969	CONTACT SPRING
7	9N967	CONTACT SPRING
8	-	SCREW (3X8)

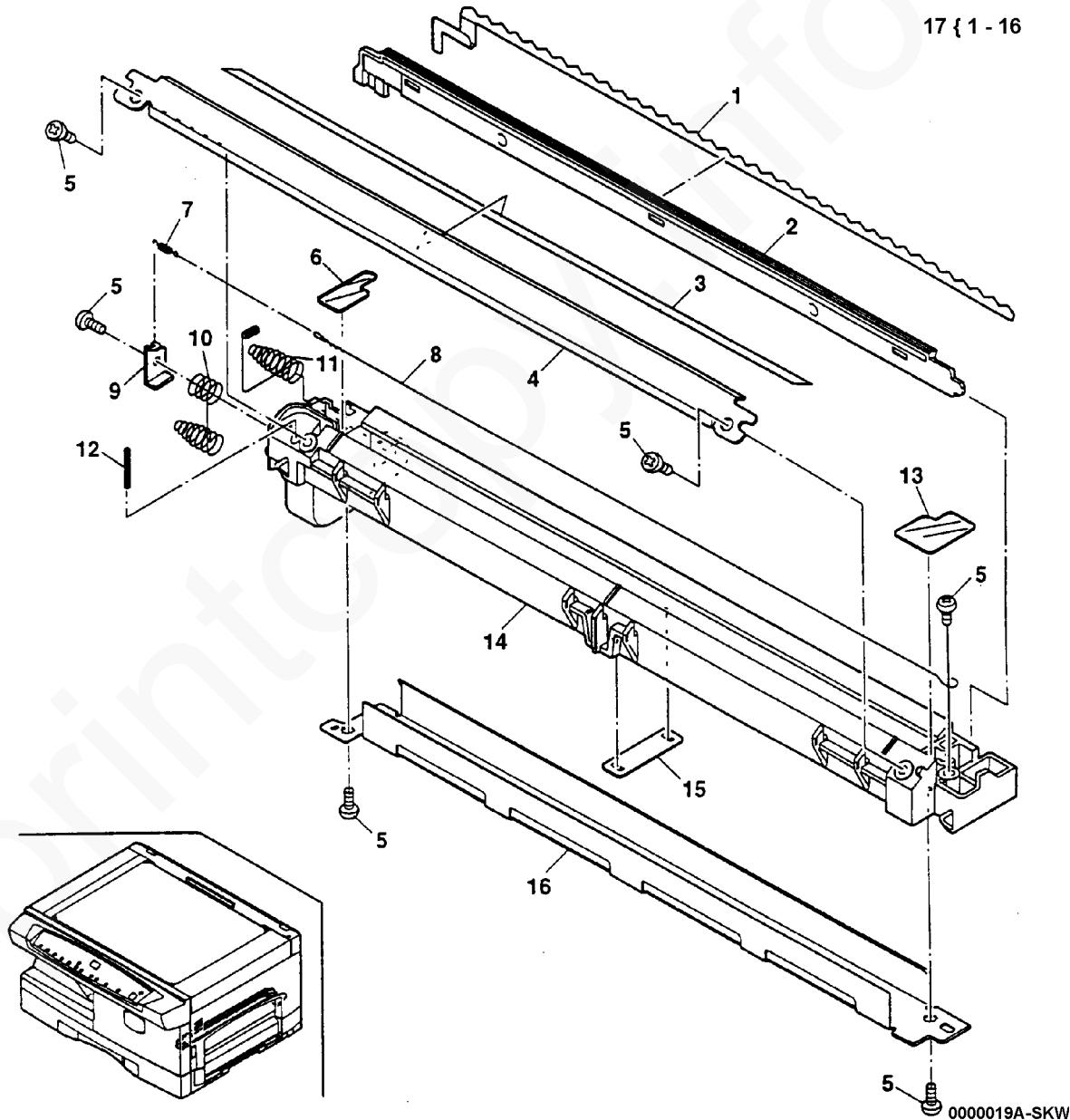


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**PL 7.3 TRANSFER/DETACK
COROTRON ASSEMBLY**

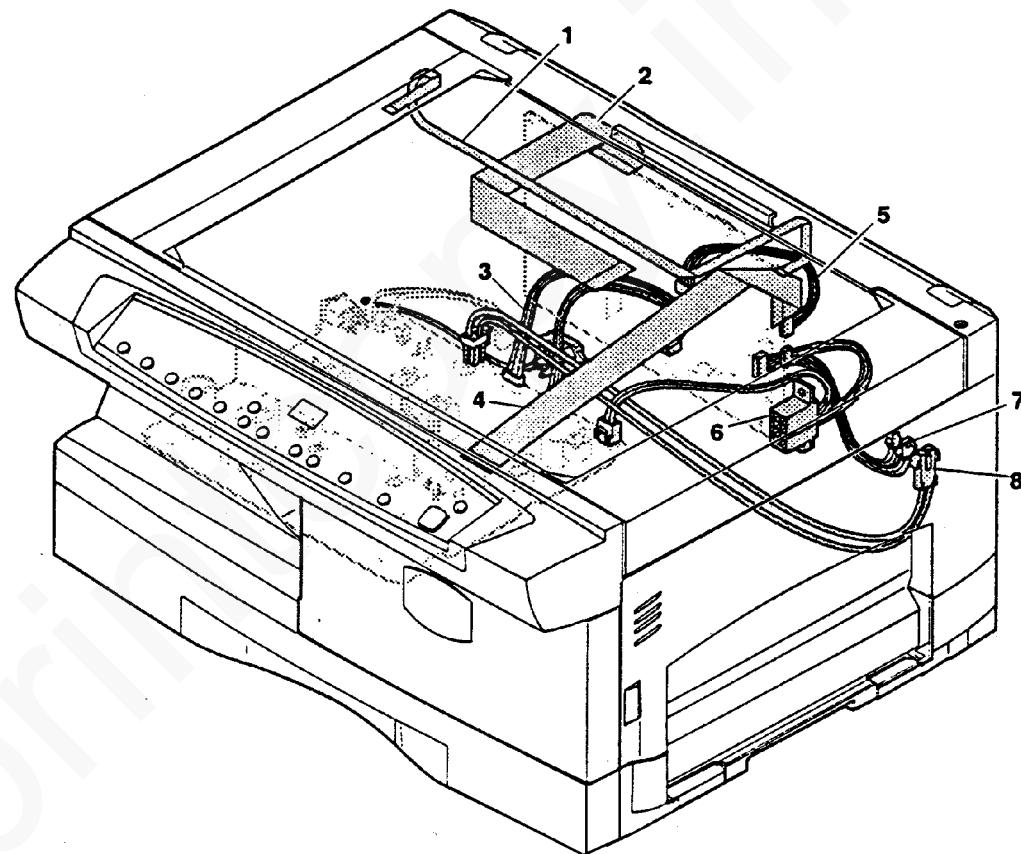
17 { 1 - 16

Item	Part	Description
1	-	DETACK COROTRON
2	-	GUIDE
3	-	INSULATOR
4	-	FRONT GUIDE
5	-	SCREW (3X6)
6	-	CONTACT COVER (R)
7	-	TENSION SPRING
8	600K15950	TRANSFER COROTRON WIRE
9	-	SPRING BRACKET
10	-	TRANSFER COROTRON SPRING
11	-	BC SPRING
12	-	GROUNDING SPRING
13	-	CONTACT COVER (F)
14	-	COROTRON HOUSING
15	-	PLATE
16	-	GROUNDING PLATE
17	19N415	TRANSFER/DETACK COROTRON ASSEMBLY (REP 9.2)



PL 7.4 HARNESES (XD120F)

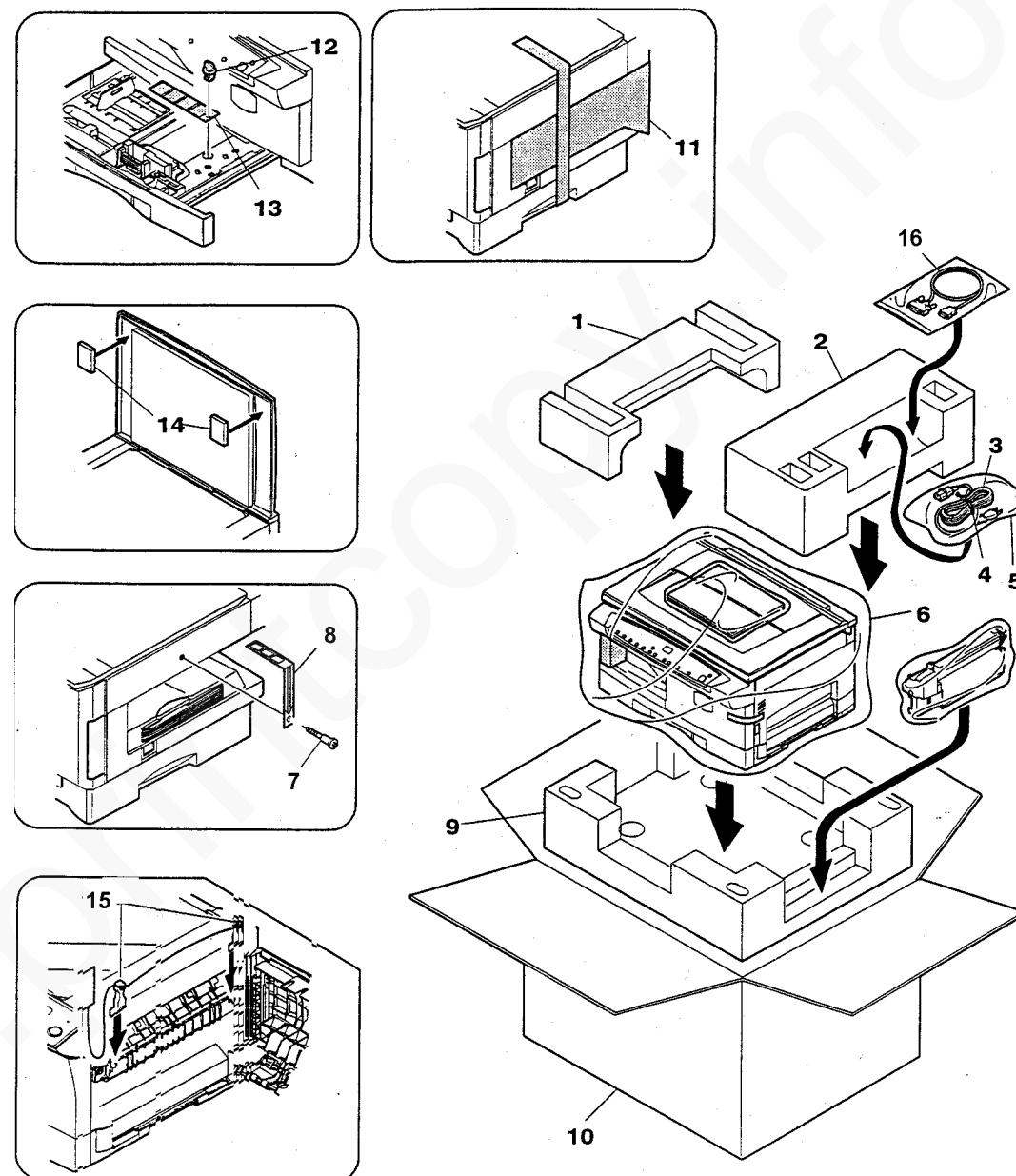
Item	Part	Description
1	152N1631	CL LEAD HARNESS
2	152N1632	ICU-CCD HARNESS
3	152N1629	CENTER FRAME HARNESS (100V)
4	152N1630	OP HARNESS
5	152N1633	MAIN MOTOR HARNESS
6	152N1627	DVS HARNESS
7	-	PPD2 INTERFACE HARNESS
8	152N1623	HL HARNESS (100V)



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PL 8.1 PACKAGING AND ACCESSORIES

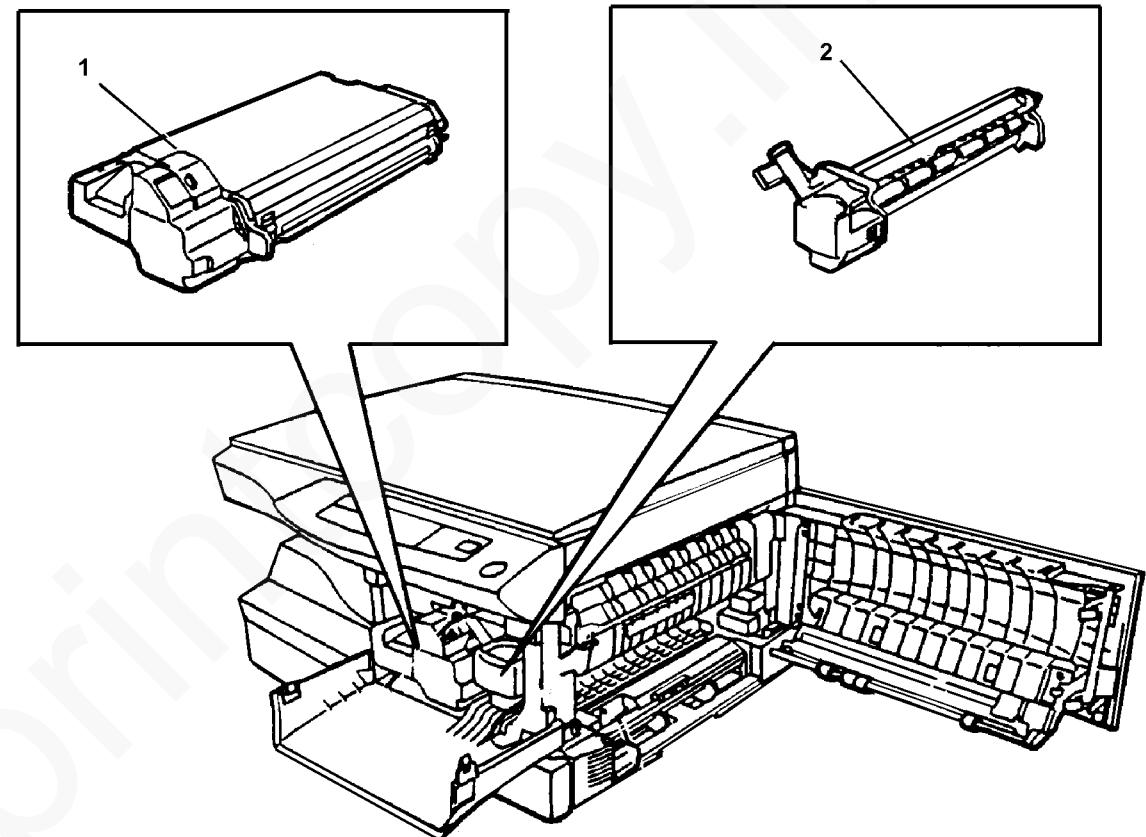
Item	Part	Description
1	-	TOP PACKING CUSHION (L)
2	-	TOP PACKING CUSHION (R)
3	-	POWER CORD
4	-	TIE WRAP
5	-	BAG
6	-	BAG
7	26E39240	HALF RATE CARRIAGE
		SHIPPING SCREW
-	701P98251	INSTRUCTIONS
8	-	SHIPPING STRAP
9	-	BOTTOM PACKING CUSHION
10	-	BOX
11	-	SHIPPING CUSHION
12	120E10520	THUMB SCREW
13	-	LABEL
14	-	DOCUMENT COVER CUSHION
15	7N696	PRESSURE BLOCK LEVER
16	117E19340	PRINTER CABLE
-	117E18690	ALTERNATE



0000021B-SKW

PL 8.2 DRUM AND TONER CARTRIDGES

Item	Part	Description
1	6R914	TONER CARTRIDGE
2	13R551	DRUM CARTRIDGE

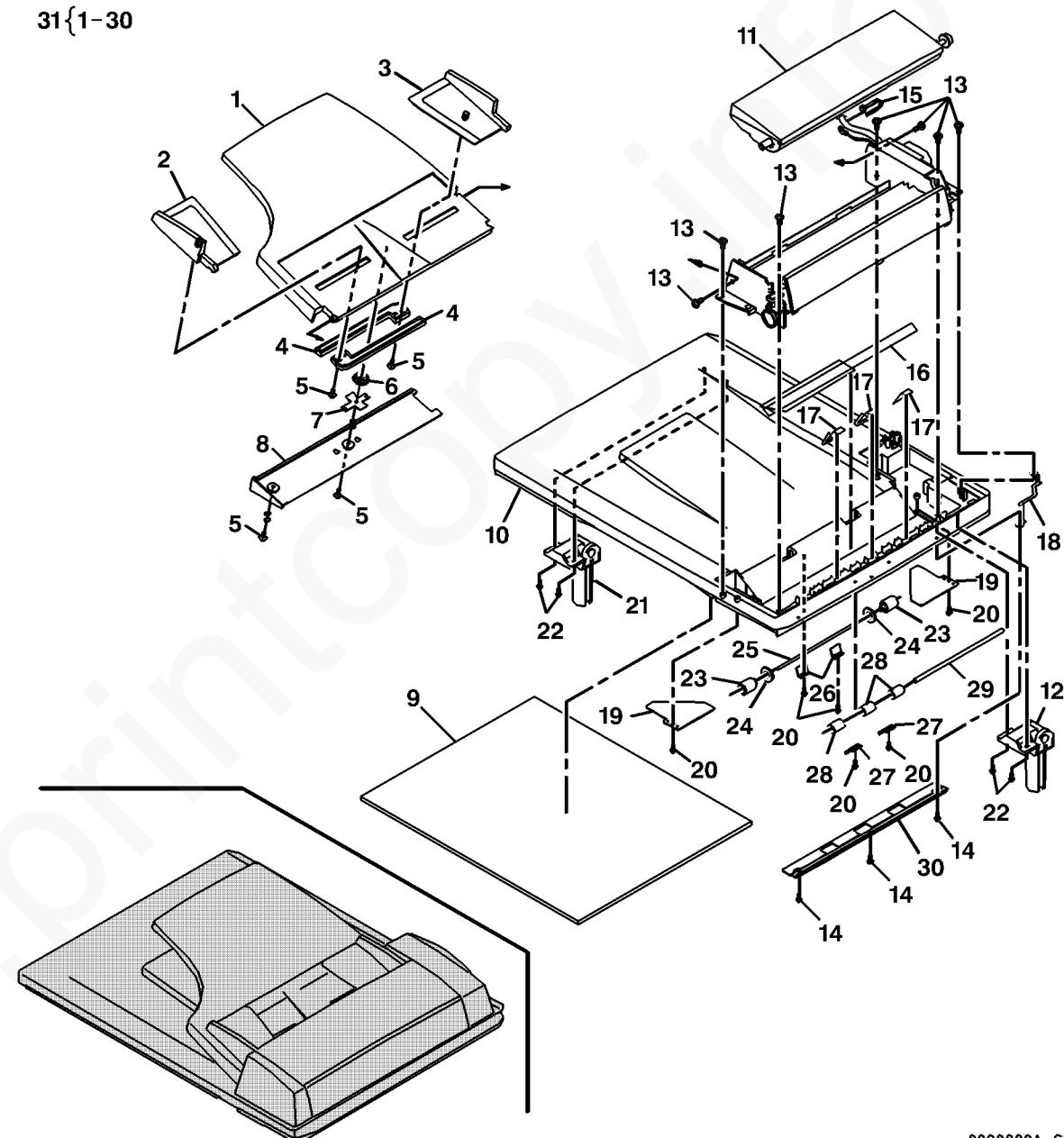


0000022A-SKW

**PL 9.1 SET DOCUMENT FEEDER
(SDF) ASSEMBLY (XD120F)**

31{1-30}

Item	Part	Description
1	50N258	DOCUMENT TRAY
2	15N295	FRONT GUIDE
3	15N296	REAR GUIDE
4	7N737	FEED RACK
5	-	SCREW (3X8X)
6	7E52500	GEAR
7	15N297	SPRING
8	2N1562	LOWER COVER
9	4N192	DOCUMENT COVER CUSHION
10	50N257	BASE
11	-	SDF FEED ASSEMBLY
12	3N683	HINGE RIGHT
13	-	SCREW (4X10)
14	-	SCREW (3X8)
15	-	TIE WRAP
16	38N255	MYLAR GUIDE
17	38N256	MYLAR GUIDE
18	9N1006	GROUND STRAP
19	38N254	PAD
20	-	SCREW (3X8)
21	3N682	HINGE LEFT
22	-	SCREW (4X10)
23	22N976	SDF EXIT ROLLER (REP 5.10)
24	14N330	SPONGE
25	6N890	EXIT SHAFT
26	9N1005	SPRING
27	9N1004	SPRING
28	22N973	SDF TRANSPORT ROLLER (REP 5.9)
29	6N889	TRANSPORT SHAFT
30	15N294	BASE PLATE
31	22N992	SDF ASSEMBLY (REP 5.1)

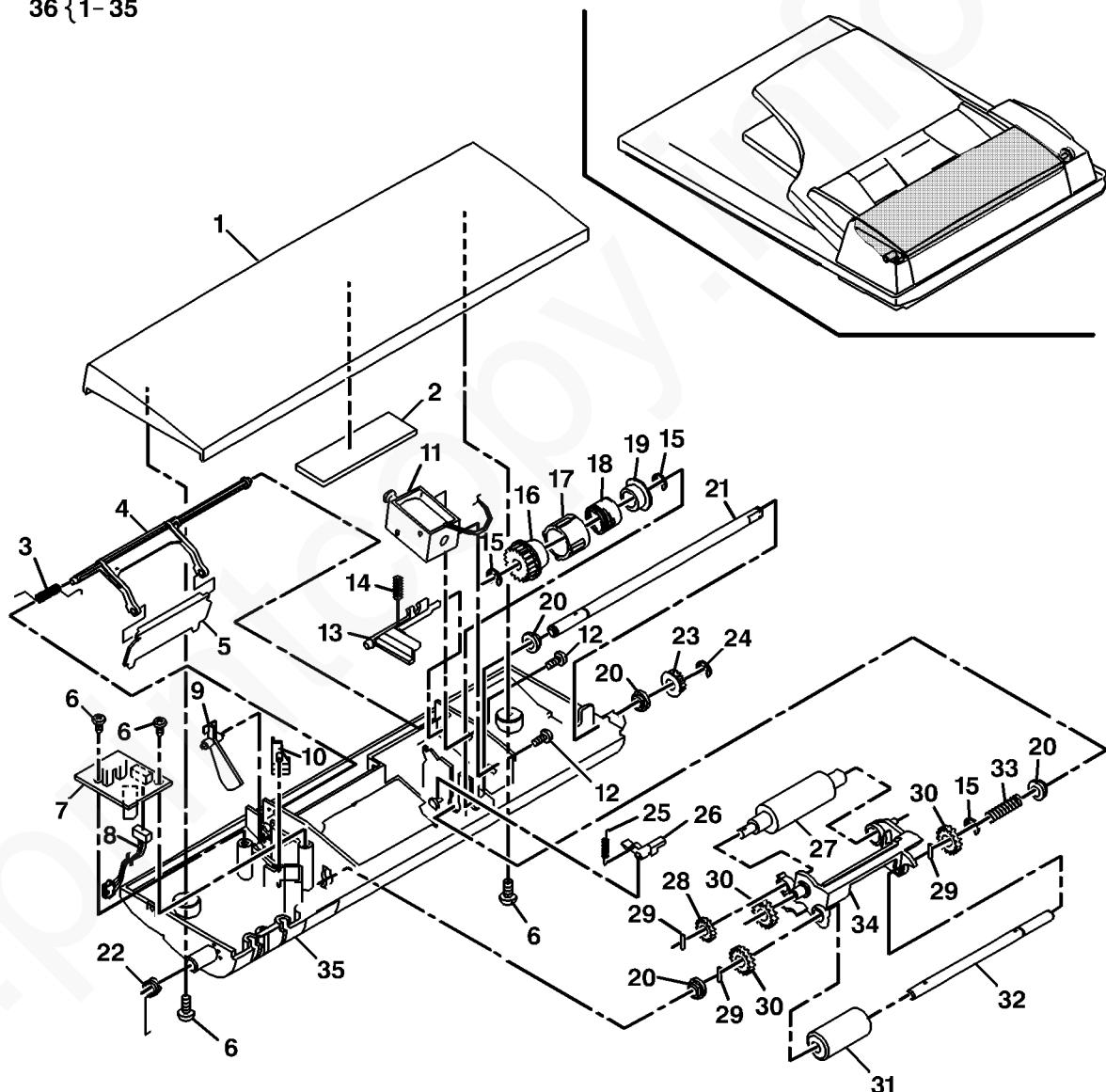


0000029A-SKW

**PL 9.2 SDF PAPER FEED ASSEMBLY
(XD120F)**

36 {1-35}

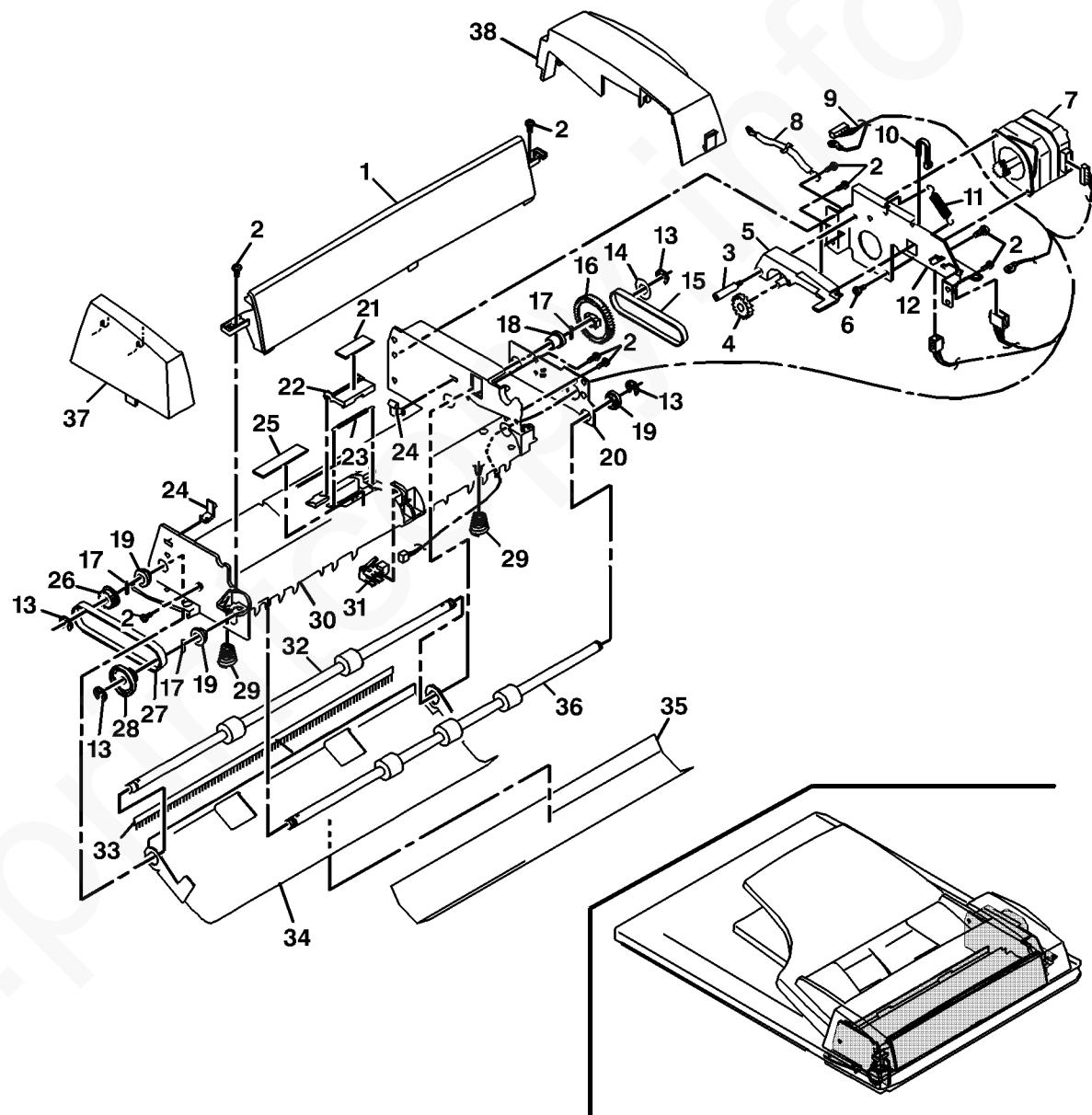
Item	Part	Description
1	2N1563	FEED ASSEMBLY TOP COVER
2	14N331	PAD
3	9N1010	PAPER STOP SPRING
4	31N161	ARM
5	3N686	PAPER GATE
6	-	SCREW
7	140N5199	SDF SENSOR PWB (REP 5.2)
8	152N1656	SDF SENSOR HARNESS
9	120N284	SDF ACTUATOR
10	120N285	SENSOR ACTUATOR
11	121N410	SDF FEED SOLENOID (SOL 1) (REP 5.3)
12	-	SCREW (3X4)
13	31N160	SOLENOID ARM
14	9N1009	SPRING
15	-	E RING
16	7N738	CLUTCH GEAR (REP 5.4)
17	16N176	CLUTCH SLEEVE
18	9N1011	CLUTCH SPRING
19	5E9560	CAM BOSS
20	16E9640	BUSHING
21	6N892	CLUTCH SHAFT
22	9N1007	TENSION SPRING
23	20N464	20MXL PULLEY
24	-	E RING
25	9N1008	CLUTCH PAWL SPRING
26	7N739	CLUTCH PAWL
27	22N977	RETARD ROLLER (REP 5.5)
28	7E29490	GEAR (16T)
29	29N182	SPRING PIN
30	7E29480	GEAR (20T)
31	5E10560	FEED ROLLER (REP 5.5)
32	6N891	FEED SHAFT
33	9N1012	SPRING
34	31N162	ARM
35	1N280	LOWER COVER
36	-	SDF PAPER FEED ASSEMBLY



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PL 9.3 SDF TRANSPORT ASSEMBLY (XD120F)

Item	Part	Description
1	38N257	DOCUMENT GUIDE
2	-	SCREW (3X8)
3	26N524	SCREW
4	7E29260	GEAR (27T)
5	31N163	DRIVE ARM
6	-	SCREW (3X4)
7	127N988	SDF DRIVE MOTOR (MOT 1) (REP 5.7)
8	152N1658	GROUND WIRE
9	152N1657	SDF HARNESS
10	-	TIE WRAP
11	9N1015	SPRING
12	1N282	DRIVE FRAME
13	-	E RING
14	28E10220	WASHER
15	23N622	DRIVE BELT (83MXL4.8)
16	7N740	GEAR (48T/15T)
17	-	SPRING PIN (2-9)
18	13N378	BEARING
19	13N377	BEARING
20	1N281	REAR FRAME
21	38N260	RETARD PAD
22	15N298	PRESSURE PLATE
23	9N1013	PRESSURE SPRING
24	7N741	FEED ASSEMBLY LATCH
25	38E13480	PAD
26	20E20740	PULLEY
27	23N623	EXIT DRIVE BELT (REP 5.6)
28	3N687	PAPER ADVANCE KNOB
29	9N1014	EXIT GUIDE SPRING
30	38N258	SDF DOCUMENT TRANSPORT
31	130N854	SDF DOCUMENT SENSOR (Q3) (REP 5.8)
32	22N979	ROLLER, EXIT
33	42N77	DISCHARGE BRUSH
34	38N259	DOCUMENT EXIT GUIDE
35	38N261	REFLECTOR
36	22N978	TRANSPORT ROLLER
37	2N1564	SDF FRONT COVER
38	2N1565	SDF REAR COVER



Part Number Index

Table 1 Part Number Index

Part Number	Part List
1N280	PL 9.2
1N281	PL 9.3
1N282	PL 9.3
2N1525	PL 1.1
2N1526	PL 1.2
2N1534	PL 1.2
2N1560	PL 1.1
2N1561	PL 1.1
2N1562	PL 9.1
2N1563	PL 9.2
2N1564	PL 9.3
2N1565	PL 9.3
2N1566	PL 1.1
3N668	PL 1.4
3N669	PL 1.3
3N670	PL 1.3
3N671	PL 1.3
3N672	PL 1.3
3N673	PL 1.3
3N674	PL 5.1
3N675	PL 2.1
3N682	PL 9.1
3N683	PL 9.1
3N684	PL 3.2
3N685	PL 3.2
3N686	PL 9.2
3N687	PL 9.3
3E26060	PL 4.1
4N188	PL 3.4
4N192	PL 9.1
4N193	PL 1.1
4E8450	PL 3.4
5N602	PL 2.2
5E4260	PL 5.1
	PL 5.8
5E9540	PL 5.5
5E9560	PL 5.5
	PL 9.2
5E9640	PL 5.1

Table 1 Part Number Index

Part Number	Part List
5E10560	PL 5.5
	PL 5.5
	PL 9.2
6N889	PL 9.1
6N890	PL 9.1
6N891	PL 9.2
6N892	PL 9.2
6R914	PL 8.2
7N694	PL 3.1
7N695	PL 6.1
7N696	PL 8.1
7N698	PL 5.1
7N699	PL 5.1
7N700	PL 5.1
7N701	PL 2.2
7N702	PL 2.2
7N703	PL 2.2
7N704	PL 2.2
7N705	PL 2.2
7N706	PL 2.2
7N707	PL 2.2
7N708	PL 2.2
7N709	PL 2.2
7N710	PL 2.2
7N711	PL 2.2
7N712	PL 2.2
7N713	PL 2.2
7N737	PL 9.1
7N738	PL 9.2
7N739	PL 9.2
7N740	PL 9.3
7N741	PL 9.3
7N742	PL 5.8
7N743	PL 5.8
7E14961	PL 6.1
7E29260	PL 9.3
7E29480	PL 5.8
	PL 9.2
7E29490	PL 5.8
	PL 9.2
7E47590	PL 5.1

Table 1 Part Number Index

Part Number	Part List
	PL 5.8
7E47670	PL 5.8
7E47680	PL 5.1
7E52500	PL 9.1
9N962	PL 1.4
9N963	PL 1.4
9N964	PL 1.4
9N965	PL 6.3
9N966	PL 6.3
9N967	PL 7.2
9N968	PL 7.2
9N969	PL 7.2
9N970	PL 5.1
9N978	PL 1.4
9N1003	PL 5.7
9N1004	PL 9.1
9N1005	PL 9.1
9N1006	PL 9.1
9N1007	PL 9.2
9N1008	PL 9.2
9N1009	PL 9.2
9N1010	PL 9.2
9N1011	PL 9.2
9N1012	PL 9.2
9N1013	PL 9.3
9N1014	PL 9.3
9N1015	PL 9.3
9N1016	PL 5.8
9E17190	PL 5.1
	PL 5.8
9E57550	PL 5.5
10N64	PL 3.4
12N105	PL 3.1
13N377	PL 9.3
13N378	PL 9.3
13R551	PL 8.2
13E12330	PL 5.1
13E12360	PL 5.8
13E12780	PL 6.1
14N330	PL 9.1
14N331	PL 9.2

Table 1 Part Number Index

Part Number	Part List
15N289	PL 5.1
15N294	PL 9.1
15N295	PL 9.1
15N296	PL 9.1
15N297	PL 9.1
15N298	PL 9.3
16N174	PL 5.1
16N176	PL 9.2
16E9640	PL 9.2
17E8540	PL 5.7
19N415	PL 1.4
	PL 7.3
19E15900	PL 5.1
19E26730	PL 3.4
19E37760	PL 4.1
19E37840	PL 4.1
19E37850	PL 4.1
20N449	PL 2.1
20N464	PL 9.2
20E20740	PL 9.3
22N924	PL 6.2
22N925	PL 2.1
22N926	PL 2.1
22N927	PL 6.3
22N928	PL 5.1
	PL 5.8
22N929	PL 5.1
22N930	PL 5.2
22N932	PL 5.2
22N933	PL 5.2
22N970	PL 5.7
22N973	PL 9.1
22N976	PL 9.1
22N977	PL 9.2
22N978	PL 9.3
22N979	PL 9.3
22N980	PL 5.8
22N992	PL 9.1
22E20680	PL 5.5
22E22060	PL 1.4
	PL 5.2

Table 1 Part Number Index

Part Number	Part List
	PL 6.3
22E23440	PL 6.1
23N596	PL 2.1
23N597	PL 2.1
23N622	PL 9.3
23N623	PL 9.3
26N524	PL 9.3
26E39240	PL 8.1
28E10220	PL 9.3
29N182	PL 5.8
	PL 9.2
31N159	PL 5.7
31N160	PL 9.2
31N161	PL 9.2
31N162	PL 9.2
31N163	PL 9.3
31E8940	PL 5.8
33N169	PL 6.2
38N230	PL 6.2
38N254	PL 9.1
38N255	PL 9.1
38N256	PL 9.1
38N257	PL 9.3
38N258	PL 9.3
38N259	PL 9.3
38N260	PL 9.3
38N261	PL 9.3
38E13480	PL 5.1
	PL 9.3
42N77	PL 9.3
42E1430	PL 5.3
	PL 5.4
50N230	PL 1.1
50N233	PL 4.1
50N256	PL 5.7
50N257	PL 9.1
50N258	PL 9.1
50N259	PL 1.1
53N142	PL 1.1
53N162	PL 1.3
53N163	PL 1.3

Table 1 Part Number Index

Part Number	Part List
53N164	PL 1.3
53N165	PL 1.3
53N166	PL 1.3
53N170	PL 1.3
62N139	PL 3.1
62N140	PL 3.4
62N141	PL 3.2
62N142	PL 3.3
62N147	PL 1.1
64N25	PL 3.1
90N138	PL 1.1
90N139	PL 1.1
96E90830	PL 3.2
108N367	PL 7.1
108N368	PL 7.1
108N369	PL 7.1
108E3660	PL 7.1
108E4370	PL 7.1
110N783	PL 5.3
	PL 5.4
110N817	PL 5.1
	PL 5.8
110E5370	PL 5.8
113N301	PL 7.2
115N273	PL 3.2
117E9750	PL 7.1
117E18690	PL 8.1
117E19340	PL 8.1
120N275	PL 6.3
120N276	PL 5.1
120N277	PL 5.2
120N284	PL 9.2
120N285	PL 9.2
120N287	PL 5.8
120E10520	PL 4.1
	PL 8.1
121N400	PL 2.2
121N401	PL 2.2
121N402	PL 5.5
121N410	PL 9.2
121N411	PL 5.8

Table 1 Part Number Index

Part Number	Part List
122N115	PL 6.1
122N133	PL 6.1
126N58	PL 6.1
126N70	PL 6.1
127N969	PL 2.2
127N970	PL 3.1
127N971	PL 2.1
127N972	PL 2.1
127N988	PL 9.3
130N854	PL 9.3
130E7840	PL 6.1
130E9190	PL 6.1
140N5106	PL 5.2
140N5107	PL 1.3
140N5109	PL 5.1
140N5110	PL 6.1
140N5111	PL 6.3
140N5112	PL 3.2
140N5113	PL 7.1
140N5114	PL 7.1
140N5115	PL 7.1
140N5116	PL 7.1
140N5117	PL 7.1
140N5199	PL 9.2
140N5205	PL 7.1
140N5206	PL 1.3
140N5207	PL 7.1
152N1622	PL 7.2
152N1623	PL 2.1
	PL 7.1
	PL 7.4
152N1624	PL 6.1
152N1625	PL 7.2
152N1626	PL 2.1
	PL 7.1
152N1627	PL 2.1
	PL 7.4
152N1628	PL 3.3
152N1629	PL 7.1
	PL 7.4
152N1630	PL 1.1

Table 1 Part Number Index

Part Number	Part List
	PL 6.3
	PL 7.4
152N1631	PL 3.1
	PL 3.2
	PL 7.4
152N1632	PL 3.2
	PL 7.4
152N1633	PL 2.2
	PL 7.4
152N1634	PL 2.1
152N1635	PL 1.4
152N1636	PL 2.1
152N1637	PL 1.1
	PL 5.1
152N1638	PL 5.1
152N1652	PL 7.1
152N1655	PL 5.7
152N1656	PL 9.2
152N1657	PL 9.3
152N1658	PL 9.3
152N1660	PL 2.1
	PL 7.1
152N1661	PL 6.1
152N1662	PL 7.1
600K15950	PL 7.3
701P98251	PL 8.1
809E11980	PL 5.7
809E12000	PL 5.8
809E12010	PL 5.8
809E24950	PL 4.1

6 General Procedures

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Entering/Exiting Diagnostics

1. Switch on the power.
- NOTE: Step 2 must be performed within 4 seconds to enter diagnostics.*
2. Press the **Clear** button, press the **Exposure Mode** button, press the **Clear** button, and press the **Exposure Mode** button.
 - a. All lamps on the Control Console will go out.
 - b. The copy count display will become blank.
3. Using the **Copy Quantity** button(s), select the number that corresponds to the desired diagnostic test.
4. Press **Start**.
5. Using the **Copy Quantity** button(s), select the number that corresponds to the desired subcode.
 - a. Pressing the Copy Quantity "ones" button increases the count by one. Pressing the Copy Count "tens" button increases the count by 10.
 - b. Pressing and holding the % button while pressing the **Copy Quantity** "ones" button will decrease the count by one. Pressing and holding the % button while pressing the **Copy Quantity** "tens" button will decrease the count by 10.
6. Press the **Start** button.
- NOTE: When exiting diagnostics, the number of times Clear needs to be pressed depends on the diagnostic code that is entered.*
7. To exit diagnostics, either switch the power off, then on, or press the **Clear** button until the Ready LED illuminates and a copy quantity of 1 appears in the Copy Quantity display.

Input Codes

An Input Code is entered to check the operation of a sensor or a switch. Enter the code for the component. Manually actuate the component while observing the appropriate lamp on the Control Console. Testing input components requires that the lamps on the Control Console function correctly.

Table 1 Input Codes

Code	Input Component	Control Console Lamp
2-[2]	SDF Sensor Status Set Detect Sensor Document Path Sensor Document Cover Closed Sensor Position Sensor	Toner Cartridge LED Paper Jam LED Drum Cartridge LED SDF Jam LED
30-[1]	Paper Feed Sensor Q1	Toner Cartridge LED
30-[1]	Fuser Jam Sensor Q2	Paper Jam LED
30-[1]	Paper Exit Sensor Q3	Drum cartridge LED
30-[1]	Bypass Tray Paper Sensor	Exposure LED
30-[1]	New Drum Cartridge Sensor	R/E LED

Output Codes

An Output Code is entered to check the operation of an output component such as a clutch or a motor.

Table 1 Output Codes

Code	Output Component	Description
1-[1]	Scan Drive Motor MOT2	The optics will scan at a speed that corresponds to the selected magnification when the Start button is pressed. The Drum Cartridge LED will illuminate when the Scan Home sensor is in the home position.
2-[3]	SDF Drive Motor MOT1	The SDF Motor operates for 10 seconds at a speed that corresponds to the current magnification.
2-[4]	SDF Feed Solenoid SOL1	The SDF Paper Feed Solenoid cycles 20 times between On (500 ms) and Off (500 ms) when the Start Button is pressed.
5-[1]	Control Console LED check	The LEDs on the Control Console will illuminate for five seconds when the Start button is pressed.
5-[2]	Heat Rod HTR1 and Exhaust Fan MOT3	The heat rod will pulse on five times each time the Start button is pressed. The Exhaust Fan will rotate in the high speed mode.
5-[3]	Exposure Lamp	The exposure lamp will illuminate for five seconds each time the Start button is pressed.
6-[1]	Paper Feed Solenoid SOL1 (Tray 1), Paper Feed Solenoid SOL2 (Tray 2), Alternate Tray Feed Solenoid	The paper feed solenoid for the selected paper tray will cycle on and off 20 times when the Start button is pressed.
6-[2]	Registration Roller Solenoid check	The registration roller solenoid will cycle on and off 20 times when the Start button is pressed.
10	Toner Motor MOT4	The toner motor will operate for 30 seconds when the Start button is pressed.
25-[1]	Main Motor MOT1	The main motor will operate for 30 seconds when the Start button is pressed. If the Toner Cartridge is installed, the Developer Bias, Charge Corotron, and Grid Bias are also enabled. If the Toner Cartridge is removed before this check is run, only the Main Motor is energized.
25-[10]	Polygon Motor operation check	The polygon motor operates for 30 seconds when the Start button is pressed.
61-[3]	Polygon Motor (HSYNC output) check	HSYNC is performed and the Polygon Motor is run for 30 seconds when the Start button is pressed. Fault Code E7 will set when the control logic fails to detect HSYNC.

Counter Data Codes

Table 1 Counter Data Codes

Code	Copier Counter Data
22-[5]	Total Copies The copy count will flash 3 digits at a time, 2 times (6 digits). 000 → 234 (Example shows a copy count of 234.) The display will pause about 2 seconds between counts.
22-[12]	Drum Cartridge Count Check The drum cartridge count will flash 3 digits at a time, 2 times (6 digits). 000 → 234 (Example shows a drum cartridge count of 234.)
22-[21]	Scanner Counter Check The scanner counter value will flash 3 digits at a time, 2 times (6 digits). 000 → 234 (Example shows a scanner count of 234.)

Counter Reset Codes

A code is entered to reset or disable drum count data.

Table 1 Counter Reset Codes

Code	Copier Counter Data
24-[7]	Drum Cartridge Count Clear When Start is pressed, the drum copy count will reset to 000-000.
24-[13]	Scanner Counter Clear When Start is pressed, the scanner counter value is reset to 000-000.

Status Code Clear

A code is entered to clear a U2 or other status code.

Table 1 Status Code Clear Codes

Code	Status Code
14	Status Code Clear - Codes other than U2 When Start is pressed, Status codes other than U2 will be cleared.
16	U2 Status Code Clear When Start is pressed, a U2 Status code will be cleared.

Adjustment Codes

A code is entered to perform an adjustment.

Table 1 Adjustment Codes

Code	Function	Range	Default	ADJ	Description																								
8-[2]	Grid Bias Voltage (High mode)	-550 to -580 VDC	-	-	When the Start button is pressed, the Charge Corotron output is present for 30 seconds in the High mode.																								
8-[3]	Grid Bias Voltage (Low mode)	-400 to -450 VDC	-	-	When the Start button is pressed, the Charge Corotron output is present for 30 seconds in the Low mode.																								
8-[6]	Transfer Corotron voltage	+1200 VDC (not under load)	-	-	When the Start button is pressed, the Transfer Corotron output is present for 30 seconds. This measurement is made at the Transfer Corotron Plate with the Side Door open and the Side Door Interlock Switch (S3/S4) actuated.																								
25-[1]	Developer Bias Voltage	-400 VDC	-	-	When the Start button is pressed, the Main Drive Motor will come on and the developer bias voltage will be present for 30 seconds.																								
26-[43]	Side Edge Erase (XD120f/XD124f)	0 to 5.0 mm	2.0 mm	-	<p>When the Start button is pressed, the code number for the side edge erase amount is displayed.</p> <table> <thead> <tr> <th>Code</th> <th>Erase Amount (mm)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0 mm</td></tr> <tr><td>1</td><td>0.5 mm</td></tr> <tr><td>2</td><td>1.0 mm</td></tr> <tr><td>3</td><td>1.5 mm</td></tr> <tr><td>4</td><td>2.0 mm (default)</td></tr> <tr><td>5</td><td>2.5 mm</td></tr> <tr><td>6</td><td>3.0 mm</td></tr> <tr><td>7</td><td>3.5 mm</td></tr> <tr><td>8</td><td>4.0 mm</td></tr> <tr><td>9</td><td>4.5 mm</td></tr> <tr><td>10</td><td>5.0 mm</td></tr> </tbody> </table> <p>To change the side edge erase amount, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.</p>	Code	Erase Amount (mm)	0	0 mm	1	0.5 mm	2	1.0 mm	3	1.5 mm	4	2.0 mm (default)	5	2.5 mm	6	3.0 mm	7	3.5 mm	8	4.0 mm	9	4.5 mm	10	5.0 mm
Code	Erase Amount (mm)																												
0	0 mm																												
1	0.5 mm																												
2	1.0 mm																												
3	1.5 mm																												
4	2.0 mm (default)																												
5	2.5 mm																												
6	3.0 mm																												
7	3.5 mm																												
8	4.0 mm																												
9	4.5 mm																												
10	5.0 mm																												
43-[1]	Fuser temperature	175 to 200°C	190°C	-	<p>When the Start button is pressed, the code number for the fuser temperature is displayed.</p> <table> <thead> <tr> <th>Code</th> <th>Temperature (C)</th> </tr> </thead> <tbody> <tr><td>0</td><td>175</td></tr> <tr><td>1</td><td>180</td></tr> <tr><td>2</td><td>185</td></tr> <tr><td>3</td><td>190 default</td></tr> <tr><td>4</td><td>195</td></tr> <tr><td>5</td><td>200</td></tr> </tbody> </table> <p>To change the fuser temperature, press the Copy Quantity "ones" button to select the code for the desired temperature and then press the Start button.</p>	Code	Temperature (C)	0	175	1	180	2	185	3	190 default	4	195	5	200										
Code	Temperature (C)																												
0	175																												
1	180																												
2	185																												
3	190 default																												
4	195																												
5	200																												

Table 1 Adjustment Codes

Code	Function	Range	Default	ADJ	Description														
43-[4]	Multi-copy fusing temperature	155 to 180°C	165°C	-	<p>When the Start button is pressed, the code number for the multi-copy fusing temperature is displayed.</p> <p>NOTE: To reduce heat build up in the machine during jobs of 20 copies or more, the fusing temperature is lowered to the selected value in the list below when the twentieth copy is reached.</p> <table> <thead> <tr> <th>Code</th> <th>Temperature (C)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>= 155</td> </tr> <tr> <td>1</td> <td>= 160</td> </tr> <tr> <td>2</td> <td>= 165 default</td> </tr> <tr> <td>3</td> <td>= 170</td> </tr> <tr> <td>4</td> <td>= 175</td> </tr> <tr> <td>5</td> <td>= 180</td> </tr> </tbody> </table> <p>To change the multi-copy fusing temperature, press the Copy Quantity "ones" button to select the code for the desired temperature and then press the Start button.</p>	Code	Temperature (C)	0	= 155	1	= 160	2	= 165 default	3	= 170	4	= 175	5	= 180
Code	Temperature (C)																		
0	= 155																		
1	= 160																		
2	= 165 default																		
3	= 170																		
4	= 175																		
5	= 180																		
46-[1]	Copy Density adjustment	00 to 99	50	6.1	<p>When the Start button is pressed, the exposure setting for Auto mode is displayed. To view the settings for the other modes, press the Exposure Mode button until the appropriate LED or LEDs illuminate.</p> <p>Exposure Mode / Illuminated LED</p> <ul style="list-style-type: none"> Auto / Auto mode LED Text / Text mode LED Photo / Photo mode LED Toner Save / Toner Save LED <p>To change an exposure setting value, press the Copy Quantity buttons until the desired setting appears in the Copy Quantity display.</p> <p>Press the Clear button to exit and store the new setting or settings.</p>														
48-[1]	Image Magnification (Front to Rear) Adjustment: Automatic	00 to 99	50	6.8	<p>Press the Exposure button until only the Auto lamp is lit, then press the Start button. The machine scans the reference line on the calibration strip, calculates the correct magnification, and automatically adjusts the setting. The adjusted setting appears in the Quantity display.</p> <p>Press the Clear button to exit the mode.</p>														
48-[1]	Image Magnification (Front to Rear) Adjustment: Manual	00 to 99	50	6.8	<p>Press the Exposure button until only the Text lamp is lit. The current setting is displayed in the Quantity display.</p> <p>To change magnification, press the Copy Quantity buttons. Increasing the number increases the magnification. Decreasing the number decreases the magnification.</p> <p>Press the Clear button to exit and store the new setting.</p>														

Table 1 Adjustment Codes

Code	Function	Range	Default	ADJ	Description
48-[1]	Image Magnification (Lead Edge to Trail Edge)	00 to 99	50	6.8	<p>Press the Exposure button until only the Photo lamp is lit. The scan speed is adjusted.</p> <p>To change magnification, press the Copy Quantity buttons. Increasing the number increases the magnification. Decreasing the number decreases the magnification.</p> <p>Press the Clear button to exit and store the new setting.</p>
50-[1]	Lead Edge Deletion	00 to 99	50	8.2	<p>Press the Exposure button until only the Text lamp is lit. The Lead Edge Deletion setting is displayed.</p> <p>To change Lead Edge Deletion, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the lead edge deletion, decrease the number. To increase the lead edge deletion, increase the number.</p> <p>Press the Clear button to exit and store the new setting.</p>
50-[1]	Trail Edge Deletion	00 to 99	50	8.3	<p>Press the Exposure button until the Auto, Text, and Photo lamps are lit. The Trail Edge Deletion setting is displayed.</p> <p>To change Trail Edge Deletion, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the trail edge deletion, decrease the number. To increase the trail edge deletion, increase the number.</p> <p>Press the Clear button to exit and store the new setting.</p>
50-[1]	Lead Edge (Scan Start) Timing	00 to 99	50	-	<p>Press the Exposure button until only the Photo lamp is lit.</p> <p>NOTE: To check this adjustment, check the lead edge registration at 70% and 141%. If they are not equal, the adjustment needs to be performed.</p> <p>The Scan Start Timing setting is displayed.</p> <p>To change Scan Start Timing, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the time before scan start, increase the number. To increase the time before scan start, decrease the number.</p> <p>Press the Clear button to exit and store the new setting.</p>

Table 1 Adjustment Codes

Code	Function	Range	Default	ADJ	Description
50-[1]	Lead Edge Registration	00 to 99	50	-	<p>Press the Exposure button until only the Auto lamp is lit. The Lead Edge Registration setting is displayed.</p> <p>To change Lead Edge Registration, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the distance between the lead edge and the image, enter a higher number. This action lengthens the Registration Roller off time.</p> <p>To increase the distance between the lead edge and the image, enter a lower number. This action shortens the Registration Roller off time.</p> <p>Press the Clear button to exit and store the new setting.</p>
50-[1]	SDF Lead Edge (Scan Start) Timing	00 to 99	50	-	<p>Press the Exposure button until the Auto and Text lamps are lit. The SDF Lead Edge (Scan Start) Timing setting is displayed.</p> <p>To change SDF Lead Edge Timing, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To decrease the time before scan start, increase the number.</p> <p>To increase the time before scan start, decrease the number.</p> <p>Press the Clear button to exit and store the new setting.</p>
50-[10]	Center Offset Adjustment: Paper Tray1 and Paper Tray 2	00 to 99	50	-	<p>Paper Tray 1: Press the Exposure button until the Auto and Paper Tray 1 lamps are lit. Paper Tray 2: Press the Exposure button until the Auto and Paper Tray 2 lamps are lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, increase the number. To shift the image toward the rear of the machine, decrease the number.</p> <p>Press the Clear button to exit and store the new setting.</p>
50-[10]	Center Offset Adjustment: Paper Tray Bypass (XD100/XD102/XD120f)	00 to 99	50	-	<p>Press the Exposure button until only the Auto lamp is lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, increase the number. To shift the image toward the rear of the machine, decrease the number.</p> <p>Press the Clear button to exit and store the new setting.</p>

Table 1 Adjustment Codes

Code	Function	Range	Default	ADJ	Description
50-[10]	Center Offset Adjustment: Print Position Alternate Paper Tray (XD104/XD124f)	00 to 99	50	-	<p>Press the Exposure button until the Auto and Alternate Tray lamps are lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, increase the number. To shift the image toward the rear of the machine, decrease the number.</p> <p>Press the Clear button to exit and store the new setting.</p>
50-[10]	Center Offset Adjustment: Scan Scan from SDF (XD120f/XD124f)	00 to 99	50	-	<p>Press the Exposure button until the Auto, Text and Photo lamps are lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, decrease the number. To shift the image toward the rear of the machine, increase the number.</p> <p>Press the Clear button to exit and store the new setting.</p>
50-[10]	Center Offset Adjustment: Scan Scan from Document Glass	00 to 99	50	-	<p>Press the Exposure button until the Auto and Text lamps are lit. The Center Offset setting is displayed.</p> <p>To change the Center Offset setting, press the Copy Quantity buttons. An increase of 1 produces a shift of 0.1 mm.</p> <p>To shift the image toward the front of the machine, decrease the number. To shift the image toward the rear of the machine, increase the number.</p> <p>Press the Clear button to exit and store the new setting.</p>
51-[2]	Registration Buckle: Paper Tray1 and Paper Tray 2 (XD100/XD102/XD104/XD120f/XD124f)	00 to 99	50	-	<p>Paper Tray 1: Press the Exposure button until the Auto and Paper Tray 1 lamps are lit.</p> <p>Paper Tray 2: Press the Exposure button until the Auto and Paper Tray 2 lamps are lit. The setting for the selected Paper Tray is displayed in the Copy Quantity display and the LED for the selected magnification is lit.</p> <p>To change the setting, select the desired magnification, then press the Copy Quantity buttons. To increase the buckle, increase the number. To decrease the buckle, decrease the number.</p> <p>Press the Clear button to exit and store the new setting(s).</p>

Table 1 Adjustment Codes

Code	Function	Range	Default	ADJ	Description
51-[2]	Registration Buckle: Paper Tray Bypass (XD100/XD102/ XD120f)	00 to 99	50	-	<p>Press the Exposure button until the Auto lamp flashes. The Paper Tray setting is displayed in the Copy Quantity display and the LED for the selected magnification is lit.</p> <p>To change the setting, select the desired magnification, then press the Copy Quantity buttons.</p> <p>To increase the buckle, increase the number. To decrease the buckle, decrease the number.</p> <p>Press the Clear button to exit and store the new setting(s).</p>
51-[2]	Registration Buckle: Alternate Paper Tray (XD104/XD124f)	00 to 99	50	-	<p>Press the Exposure button until the Auto and Alternate Paper Tray lamps are lit. The Alternate Paper Tray setting is displayed in the Copy Quantity display and the LED for the selected magnification is lit.</p> <p>To change the setting, select the desired magnification, then press the Copy Quantity buttons.</p> <p>To increase the buckle, increase the number. To decrease the buckle, decrease the number.</p> <p>Press the Clear button to exit and store the new setting(s).</p>
51-[6]	SDF Exposure Correction	00 to 99	50	-	<p>The current setting for SDF Exposure is displayed when this diagnostic code is entered.</p> <p>To change the setting, press the copy quantity "tens" button until the new value is displayed, then press the Start button. The new value is stored and a copy is made. If necessary, repeat the process until the output has the desired density.</p> <p>Increase the setting to obtain darker copy output. Decrease the number to obtain lighter copy output.</p> <p>Press the Clear button to store the setting and exit the Diagnostic mode.</p>

Configuration Codes

These codes allow the displaying or changing of various machine configurations.

Table 1 Configuration Codes

Code	Function	Range	Default	ADJ	Description
22-[14]	P-ROM version	-	-	-	When the Start button is pressed, the P-ROM version displays as three digits on the Copy Quantity display.
26-[1]	Tray Configuration	0 or 1	-	-	When the Start button is pressed, the current tray configuration is displayed. 0 = Single sheet bypass 1 = Alternate Tray To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.
26-[2]	SDF Setting	0 or 1 or 2	-	-	When the Start button is pressed, the current SDF configuration is displayed. 0 = Without SDF 1 = With SDF 2 = Not available To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.
26-[3]	Paper Tray 2 setting	0 or 1	-	-	When the Start button is pressed, the current Paper Tray 2 configuration is displayed. 0 = Without Paper tray 2 1 = With Paper tray 2 To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.
26-[6]	Paper size type	0 or 1	-	-	When the Start button is pressed, the current paper size type is displayed. 0 = Inch series 1 = AB series 2 = Japan AB Series To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.
26-[7]	Copy output speed	10, 12, 15 cpm	-	-	When the Start button is pressed, the machine copy output speed is displayed.
26-[20]	Trail edge deletion	0 or 1	0	-	When this code is entered, the currently active code number is displayed. 0 = Trail edge deletion is allowed 1 = Trail edge deletion is not allowed To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.

Table 1 Configuration Codes

Code	Function	Range	Default	ADJ	Description
26-[30]	CE mark application	0 or 1	0	-	<p>When this code is entered, the currently active code number is displayed.</p> <p>0 = CE mark application control off 1 = CE mark application control on</p> <p>To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.</p>
26-[38]	Drum cartridge life end	0 or 1	0	-	<p>When this code is entered, the currently active code number is displayed.</p> <p>0 = End of life disabled 1 = End of life enabled</p> <p>To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.</p>
26-[39]	Memory capacity	0, 1, 2	-	-	<p>When this code is entered, the currently active code number is displayed.</p> <p>0 = No memory 1 = 4 Mbyte 2 = 6 Mbyte</p> <p>To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.</p>
26-[40]	Polygon motor off time setting	0, 1, 2, 3	-	-	<p>When this code is entered, the currently active code number is displayed.</p> <p>0 = 0 seconds 1 = 30 seconds 2 = 60 seconds 3 = 90 seconds</p> <p>To change the configuration, press the Copy Quantity "ones" button until the desired code is displayed, then press the Start button.</p>

Total Copy Count Read

1. Enter diagnostics.
2. Record the total copy count.
 - a. Enter code 22-[5].
 - b. The copy count will flash 3 digits at a time, 2 times (6 digits), then repeat the sequence indefinitely. The most significant digits will flash first.
For example, 000 → 234 (Example shows a Copy count of 234.)
 - c. The display will pause about 1 second between counts.
3. To end the copy count read, press the **Clear** button.

Drum Cartridge Count Read

1. Enter diagnostics.
2. Record the drum cartridge copy count.
 - a. Enter code 22-[12].
 - b. The drum count will flash 3 digits at a time, 1 times (6 digits), then repeat the sequence indefinitely. The most significant digits will flash first.
For example, 000 → 234 (Example shows a drum count of 234.)
 - c. The display will pause about 1 second between counts.
3. To end the drum count read, press the **Clear** button.

Drum Cartridge Count Clear

1. Enter diagnostics.
2. Enter code 24-[7].
3. Press the **Start** button.
4. The drum cartridge count will reset to 0.
5. Exit diagnostics.

GP1 Image on Photoreceptor

1. Open the document cover and prepare the copier to make a copy of Side B of the Standard Test Pattern (82P524).
2. Leaving the document cover open, press the **Start** button. (The carriage will begin to scan.) Open the copier or turn off the power when the carriage reaches the center. This will cause a paper jam.
3. Clear the paper jam, being careful not to disturb the image on the photoreceptor.
4. Observe the image on the photoreceptor.
5. Repeat steps 1 through 4 two more times, or as required.

Programmable Settings

Features 0-9, 11, 12 & 14

To change a programmable setting, refer to Table 1.

NOTE: Programmable features can only be accessed while the copier is in the Ready mode.

1. Press the **Toner Save** mode button.
The LED illuminates.
2. Press the **Toner Save** mode button again and hold it for 4 to 6 seconds.
The LED next to Auto mode lights.
The three red LEDs (Jam, Toner Cartridge indicator, Photoreceptor) flash.
3. Press the "10's" button to select the program number of the feature to be changed.
NOTE: You will not be given the choice to change an option if the copier is not equipped with the feature.
4. Press the **Start** button.
The current setting for the program will flash.
5. Press the 1's-unit button until the desired option number is displayed.
6. Press the **Start** button to store the selection.
7. Press the **Clear** button to continue making other changes, or press the **Exposure Mode** button to return to Ready mode.

Feature 10

To change the programmable feature, refer to Table 1.

NOTE: Programmable features can only be accessed while the copier is in the Ready mode.

1. Press the **Toner Save** mode button.
The LED illuminates.
2. Press the **Toner Save** mode button again and hold it for 4 to 6 seconds.
The LED next to Auto mode lights.
The three red LEDs (Toner Cartridge, Drum Cartridge, Paper Jam) flash.
3. Press the "10's" button until the number 10 is displayed.
NOTE: You will not be given the choice to change an option if the copier is not equipped with the feature.
4. Press the **Start** button.
The current reduction/enlargement setting will flash.
5. Press the **Zoom-Up** or **Zoom-Down** button until the desired percentage is displayed.
6. Press the **Start** button to store the selection.

7. Press the **Clear** button to continue making other changes, or press the **Exposure Mode** button to return to Ready mode.

Table 1 Programmable Features Settings

Program Number	Program	Option Number and Option
0	Priority Tray	0 - Main paper tray 1 - Alternate paper tray
1	Auto Clear Time Out	0 - Off 1 - 30 seconds 2 - 60 seconds (default) 3 - 90 seconds 4 - 120 seconds
2	Time-out to Power Save	0 - Off 1 - 45 seconds 2 - 90 seconds (default) 3 - 2 minutes 4 - 5 minutes
3	Time-out to Power Shut-Off	0 - 2 minutes 1 - 5 minutes (default) 2 - 15 minutes 3 - 30 minutes 4 - 60 minutes 5 - 120 minutes 6 - Off
4	Default Magnification	0 - 100% (default) 1 - 99% 2 - 101%
5	Default Exposure	0 - Auto Exposure (default) 1 - Text 2 - Photo 1
6	Auto Contrast Adjustment	0 - Lightest 1 - Lighter 2 - Normal (default) 3 - Darker 4 - Darkest
7	Paper Trail Edge Deletion (4 mm)	0 - On (default) 1 - Off
8	Paper Tray Bypass Auto Start	0 - On (default) 1 - Off
9	SDF Auto Start	0 - On (default) 1 - Off
10	R/E Preset	50 - 200% 50% (default)
11	Auto Paper Tray Switching (XD120f and XD124f)	0 - On 1 - Off (default)

Table 1 Programmable Features Settings

Program Number	Program	Option Number and Option
14	Return to Print Mode Time Out	0 - 60 seconds (default) 1 - 90 seconds 2 - 120 seconds 3 - 150 seconds 4 - 180 seconds 5 - Off - no time out
16	Drum Cartridge Life Remaining	Percent (0-100)

Physical Characteristics

Table 1 Machine Dimensions

Machine Dimensions	Width x Depth x Height
XD100/XD102	24 x 17.5 x 12 inches (610 x 445 x 304 mm)
XD104	30 x 17.5 x 12 inches (762 x 445 x 304 mm)
XD120f	24 x 18.75 x 18 inches(610 x 476 x 457 mm)
XD124f	30 x 18.75 x 18 inches (762 x 476 x 457 mm)

Table 2 Machine Weight

Machine Weight	(includes Drum Cartridge and Toner Cartridge)
with cartridges	40.9 lbs (18.6 kg) (XD100/XD102/XD104)
with cartridges	53 lbs (24.1 kg) (XD120F/XD124f)

Copier Footprint

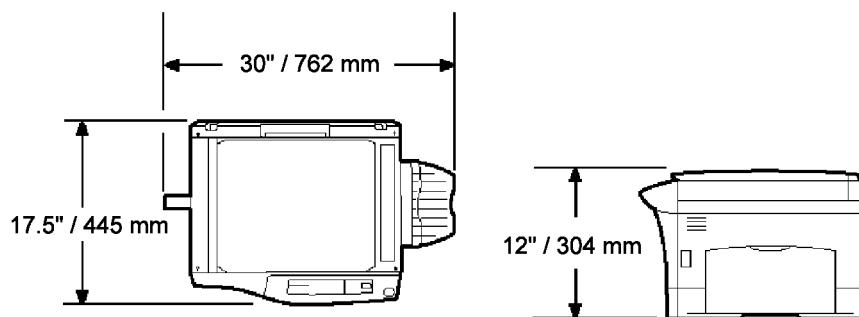


Figure 1 Copier Footprint (XD100/XD102/XD104)

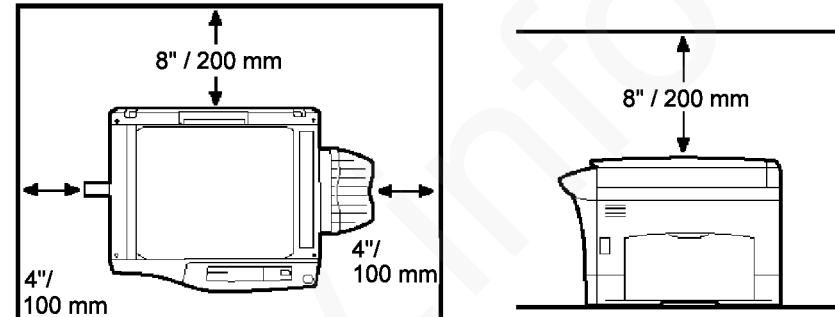


Figure 3 Minimum Clearances (All models)

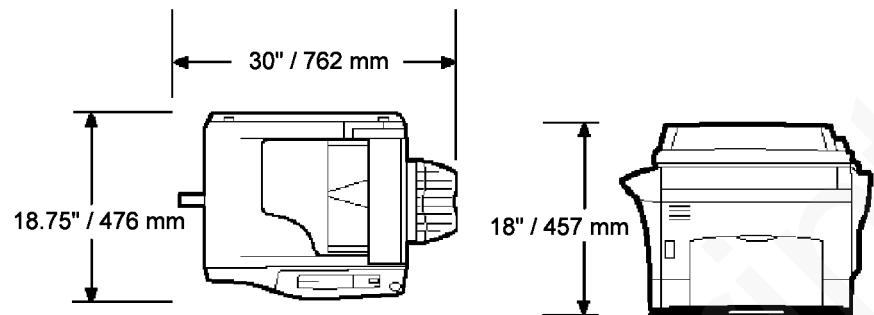


Figure 2 Copier Footprint (XD120f/XD124f)

Electrical Requirements

Electrical Requirements	120 VAC +/- 10%, 50/60 Hz, 15A
Power Consumption	MAX: 1.0 kW Standby: 14.3 Watts Shut-off: 5 Watts

Copier Capabilities

Original Size	Document Glass: 10" x 14" maximum (B4) Set Document Feeder: 10" x 14" (B4) maximum
SDF Capacity	30 pages, 20 lb/80 gsm 16 lb - 24 lb (60 -90 gsm)
Copy Ratio Percentages	1:1 +/- 1% Preset: 50, 64, 78, 100, 129, 200, one customer settable Zoom: 50 - 200%
Copy Paper Size and Weight	Tray 1 and Tray 2 5.5x8.5" / A5 to 8.5x14" / 216x356mm 16-24 lb / 60-90 gsm Bypass Tray/Alternate Tray 3.5x5.5" / 89x140mm to 8.5x14" / 216x356mm 14-34 lb / 52-130 gsm
Copy Rate	10 cpm at 600 dpi, 8-1/2" x 11" (A4) landscape and smaller, same size originals (XD100/XD102/XD104) 12 cpm at 600 dpi, 8-1/2" x 11" (A4) landscape and smaller, same size originals (XD120f/XD124f)
Print Rate	8 ppm at 600 dpi with ECP parallel port communications enabled
Paper Tray Capacity: XD100 XD102 XD104 XD120f/XD124f	250 sheets - 20 lb/80 gsm 200 sheets - 24 lb/90 gsm 250 sheets - 20 lb/80 gsm Tray 1 - 250 sheets, 20 lb/80 gsm Tray 2 - 250 sheets, 20 lb/80 gsm
Paper Tray Bypass: XD100 XD102 XD120f	1 1 1
Alternate Paper Tray: XD104/XD124f	50
First copy output time	9 seconds
Warm up time	less than 23 seconds
Restrictions: Paper Stock	Feed recycled paper, labels, or transparencies one sheet at a time. Use labels and transparencies which are specifically designed for copiers (high temperatures).

Supplemental Tools and Supplies

Table 2 Tools

Tool	Part Number
All Purpose Cleaner	XL - 8R90175
Antistatic Fluid	8R90273
Black Bag	95P2362
Bottom Pad	USCO/XCL/XL - 19P580
Cotton Swab	USCO - 35P2162
Cleaning Cloth	XL - 8R90019
Film Remover	USCO/XCL - 43P45
Formula A	USCO/XCL - 43P48 XL - 8R90175
General Cleaning Solvent	USCO - 43P78 XL - 8R90176
Fuser Lube	8R983
Turbine Oil	70P95
Heavy-Duty Towels	USCO/XCL - 35P3191
Lens and Mirror Cleaner	USCO/XCL - 3P81 XL - 8R901784
Lint-Free Cloth	USCO/XCL/XL - 600S4372
Oil	USCO/XCL - 70P23 XL - 70P95
Service Log Pouch	600K53510
Test Pattern	82P524 (USCO and XCL) 82P523 (XL) 82P12130 (USCO)

Table 3 Supplies

Supply Name	Part Number
Toner Cartridge	6R915
Drum Cartridge	13R552

Lot Number Identification

Drum Cartridge

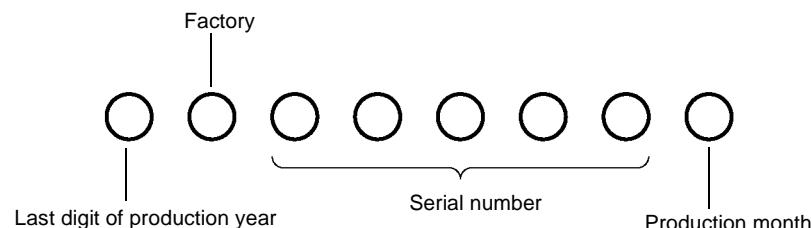


Figure 1 Drum Cartridge Lot Number Identification

Toner Cartridge

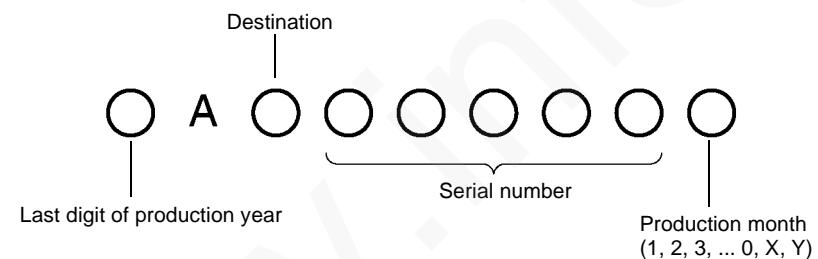


Figure 3 Toner Cartridge Lot Number Identification

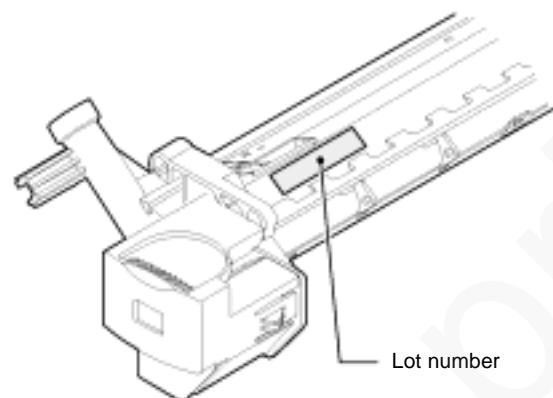


Figure 2 Drum Cartridge Lot Number Label Location

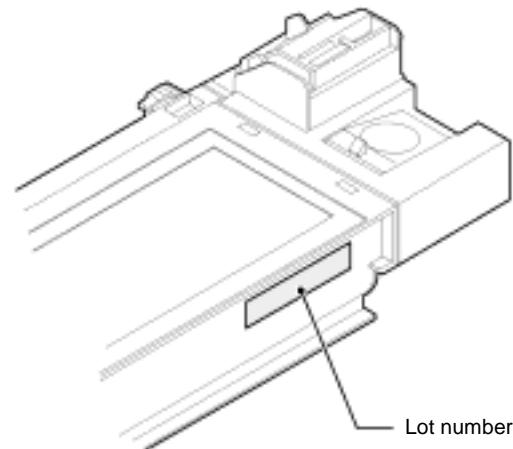


Figure 4 Toner Cartridge Lot Number Label Location

General Service Notes

WorkCentre XD Series Toner Cartridge Yield

A small number of customers may complain that they are not getting 6000 copies from their toner cartridge.

The expected Toner Cartridge yield of 6000 copies is based on an average area coverage of six (6) percent per 8.5" X 11" (A4) copy. However, yield varies with area coverage of customer documents, document size, contrast setting, and percent of copies made with the document cover open. Therefore, the 6000 copies yield cannot be guaranteed.

It is important to understand that many of the customer's documents are greater than 6% area coverage. Any document which contains more area coverage than the samples represented in Figure 1 and Figure 2, will result in a yield of less than 6000 copies. Figure 3 and Figure 4 show examples of area coverage that exceeds 6 %.

1. In cascade development gray lines develop nearly as completely as black lines.
 2. This indicates the high contrast which may be obtained with this type of development.
 3. However, the deposition of powder in any area is approximately proportional to the electrostatic contrast between that area and its background.
 4. A black line on a gray background will reproduce as a dense line on a clear background because only potential differences are developed.
 5. Summarizing, we may say that cascade-development xerography has the following characteristics:
 6. a. Narrow lines are developed to a density approximately proportional to the contrast between the line and its background density.
 7. b. Wide areas are developed at the edges to about the same degree, and are essentially underdeveloped internally.
 8. Xerocopies made with a developer having a high triboelectric difference have less background and sharper, more well defined characters of somewhat lower density than those made with a developer having a low triboelectric difference.
 9. If, however, the triboelectric difference is too great, very little powder deposition will occur in the image areas and a washed-out print will result.
(Text from XEROGRAPHY TODAY, 1955 "Photographic Engineering")
- XTP 31Q201

Figure 1 Three percent coverage

Section 8-24. Quarterly and annual financial reports.

The commissioner of finance shall prepare for the mayor for submission in their unitary to the state legislature financial reports for each fiscal year, and for such other periods as may be required by the mayor. The annual financial report shall be printed for distribution as soon as possible after the close of each fiscal period.

Section 8-25. Special audits.

Upon the death, resignation, removal, or expiration of the term of any officer of the city, other than the auditor, shall make an audit and investigation of the accounts of such officer and shall report the same to the mayor and to the council. Either the council or the mayor may at any time provide for an audit or investigation of the accounts of any office or department of the city government. In case of death, removal, or expiration of the term of the auditor, the same shall cause an audit to be made of his or her accounts. If, as a result of any audit, or investigation, any deficiency be found, immediate steps shall be taken to correct the same. The auditing auditor shall immediately give notice thereof to the council, the mayor and the city attorney, and the latter shall forthwith proceed to collect such indebtedness.

Section 8-26. Various funds.

The various independent funds, and the provisions governing their use shall be specified in the administrative code.

Section 8-27. Capital fund.

There is hereby established a capital fund which shall be used to account for capital improvements financed from capital authorizations transferred from the general and other funds. Proceeds of capital improvements shall be used in the capital fund. A capital appropriation contained in the operating budget shall be transferred to the capital fund and shall continue in force until the purposes for

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Figure 2 Five percent coverage

1. Surface dye sensitization has not been achieved with selenium. The reason may be that, since the lack of grains results in a low surface/volume ratio, no appreciable perturbation can be created in the crystal lattice due to the presence of the dye. Zinc oxide grains in a resin binder have been known for many years. It has recently been reported that the amount of dye required amounts to at most a few monolayers. If too much dye is present, the sensitivity is decreased, and this decreases the quantum efficiency.
 2. When used with corona discharging, these zinc oxide layers have a quantum efficiency still higher than unity. The dye molecule absorbs a photon of visible light and then injects an electron into the conduction band of a zinc oxide crystallite. This electron now behaves as if it had been created by an ultraviolet photon within the crystallite itself. The electron is then captured by the dye molecule again, and the dye molecule undergoes a single-step photochemical regeneration. This is a self-repeating process, going back each time to its initial state through a mechanism of regeneration.
 3. Nondoped zinc oxide papers are about as photosensitive as silver halide contact papers, and are about as good as the best panchromatic selenium plates (i.e., ASA 1-2). The rest of the panchromatic selenium structures described above have a speed of ASA 10, or approximately that of Kodachrome film. In order to obtain a speed comparable to that of the best panchromatic selenium, greater gains will have to be achieved.
 4. Internal activation. Only a portion of quantum amplification is evident in the solid-state structures. Nonpractical successes have been published; it is true that in selected structures photoconductive gains greater than one have been observed for several materials such as cadmium sulfide, cadmium selenide, zinc sulfide, and even zinc oxide. For example, in a zinc oxide structure, if an electron is injected into the conduction band, and if the electron is trapped, the electron drifts to the anode, and if the contact cathode is injecting type, electrons will continue to flow (secondary photocurrent) until the hole disappears by recombination with the trapped electron. This is because the photoluminators used for Xerography are not able to store charge in a reservoir which must be filled or unfilled in order to change the secondary photocurrent.
 5. This gain, which is the ratio of carrier lifetime to transit time, can be achieved only with ohmic contacts. With a blocking contact, the gain is obtained in charging a series capacitor. This is a slow process, and a quantum efficiency of unity is impossible. For instance, for an n-type photoconductor, charged negatively by corona, the electron generated by photon absorption discharges one positive charge at the anode, and the electron is then captured by the anode. In this case, the gain is unity. Zinc oxide plates could be made to work somewhat with ohmic contacts, the gain could be achieved only with a slow rise time of the photocurrent. This is because the photoluminators used for Xerography are not able to store charge in a reservoir which must be filled or unfilled in order to change the secondary photocurrent.
 6. Two approaches to obtaining quantum gain are therefore being pursued: (1) Doping of the zinc oxide structure so that the traps are near the Fermi level, instead of far from it, instead lie closer to the Fermi level so that the traps are effectively kept occupied by excitation from the recombination center, and (2) The use of multiple-layer structures in which the traps are located in the intermediate layers.
 7. Because of the need for ohmic contacts, and also because all presently known quantum gain materials exhibit high dark currents, these structures cannot be employed in the ordinary Xerographic system. However, a new technique, called "electro-deposition of metal ions from solution" has been used to develop a latent conductivity image in exposed zinc oxide binder layers to give a quantum gain of 10. This solution is in contact with a positive electrode, and the back of the zinc oxide layer has an injecting metal electrode that fine metal ions come from the solution to replace the metal ions in the front metal.
 8. Many substances have been reported to have photoconductive properties, and three types of systems can be distinguished: solids, suspensions, and solutions of organic compounds (in resins and waxes). All of these systems have certain properties in common: (a) The molecular structure is conjugated, and the photoconductivity is electronic, not ionic; (b) the photoconductivity is induced rather than conducted; (c) the photoconductivity is similar to inorganic semiconductors; and (d) carrier excitation after occurs via a charge transfer transition. (From *Advances in Xerography*, 1969, 1962, 1963, "PSCE")
- XPP-N312.00

Figure 3 Eleven percent coverage

Curtis House After Restoration

Wins Art Award
By ALEX

The Newton Art Association last night presented its annual amateur artist awards at the home of Mrs. Augustine of 812 Brickett Road. Besides the honor one award is given to the amateur artist of the tri-county area; a cash award of \$500 was made.

The person chosen for the award was Diane's recent one-person exhibition. Her work, which included the masterful and impressive work "Whaling," a 15-foot long painting depicting the annual struggle of a whale in the same showing, Diane's range of subjects is wide and varied, to encompass serene landscapes, portraits, and even Mondrian-style geometric art.

Diane

"I really appreciate this honor," said Diane, visibly moved at the announcement. "I think it's important that the money was important to her as well, because it would pay for my education. I'm a painter and canvases."

The young Aufrayne graduated with high honors from the School of Journalism of Clarendon Community College. While in college, she was working at house painting for one year before she landed her present job at the Newton Hospital.

(continued on page 18)

Curtis House Front Entrance

Curtis House Restored
By ALICE

Restoration of the historical Curtis House has just been completed by the Donald M. Curtis family of Newton. The Curtis house, situated at 14 Hooper Street, was severely damaged in a fire three years ago, and was left uninhabitable. For one year the house stood as a shell, forgotten as the Donald Curtises moved into their present home on Yarling Drive.

The Curtis house was built in 1881 by Colonel Norman F. Curtis, who was a prominent and substantial part of the population of modern Newton. Since then the house has passed through four generations to generation to the Donald Curtises.

The Curtis house has always remained in the Curtis Family, though the original estate included estates (Hartwell, Eustis, Street) which were sold to pay taxes on the ex-husband's estate.

Asked what he thought about the prospect of moving back into the Curtis house, the 70-year old Dennis Curtis exclaimed, "I can't wait!"

Figure 4 Twenty-three percent coverage

7 Wiring-Data

Plug/Jack Location Index

Plug / Jack Location Index	7-3
Plug / Jack Location Drawings	7-4

BSDs

Block Schematic Diagrams	7-9
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Plug / Jack Location Index

P/J no.	LOCATION	FIG.
P/J9	To Toner Cartridge	7-4

P/J no.	LOCATION	FIG.	P/J no.	LOCATION	FIG.
CN1	On Power supply PWB	7-1	CN1	On Power supply PWB	7-1
CN2	On Power supply PWB	7-1	CN2	On Power supply PWB	7-1
CN6	On Power supply PWB	7-1	CN6	On Power supply PWB	7-1
CN9	On Power supply PWB	7-1	CN9	On Power supply PWB	7-1
CN10	On Power supply PWB	7-1	CN10	On Power supply PWB	7-1
CN11	On Power supply PWB	7-1	CN11	On Power supply PWB	7-1
CN101	On Main PWB (Without SDF)	7-2	CN101	On Main PWB (With SDF)	7-3
CN101	On Main PWB (With SDF)	7-3	CN101	On Main PWB (With SDF)	7-3
CN102	On Main PWB (Without SDF)	7-2	CN104	On Main PWB (With SDF)	7-3
CN102	On Main PWB (With SDF)	7-3	CN105	On Main PWB (With SDF)	7-3
CN103	On Main PWB (Without SDF)	7-2	CN106	On Main PWB (With SDF)	7-3
CN103	On Main PWB (Without SDF)	7-2	CN107	On Main PWB (With SDF)	7-3
CN104	On Main PWB (Without SDF)	7-2	CN108	On Main PWB (With SDF)	7-3
CN105	On Main PWB (Without SDF)	7-2	CN109	On Main PWB (With SDF)	7-3
CN106	On Main PWB (Without SDF)	7-2	CN110	On Main PWB (With SDF)	7-3
CN107	On Main PWB (Without SDF)	7-2	CN111	On Main PWB (With SDF)	7-3
CN108	On Main PWB (Without SDF)	7-2	CN112	On Main PWB (With SDF)	7-3
CN109	On Main PWB (Without SDF)	7-2	CN113	On Main PWB (With SDF)	7-3
CN110	On Main PWB (Without SDF)	7-2	CN114	On Main PWB (With SDF)	7-3
CN111	On Main PWB (Without SDF)	7-2	CN115	On Main PWB (With SDF)	7-3
CN112	On Main PWB (Without SDF)	7-2	CN116	On Main PWB (With SDF)	7-3
CN113	On Main PWB (Without SDF)	7-2	CN117	On Main PWB (With SDF)	7-3
CN114	On Main PWB (Without SDF)	7-2	CN118	On Main PWB (With SDF)	7-3
CN115	On Main PWB (Without SDF)	7-2	CN119	On Main PWB (With SDF)	7-3
CN116	On Main PWB (Without SDF)	7-2	CN120	On Main PWB (With SDF)	7-3
CN117	On Main PWB (Without SDF)	7-2	CN121	On Main PWB (With SDF)	7-3
CN118	On Main PWB (Without SDF)	7-2	CN122	On Main PWB (With SDF)	7-3
CN119	On Main PWB (Without SDF)	7-2	CN123	On Main PWB (With SDF)	7-3
CN120	On Main PWB (Without SDF)	7-2	P/J6	To Fuser Heat Rod	7-4
CN121	On Main PWB (Without SDF)	7-2	P/J7	To Fuser Jam Sensor	7-4
CN122	On Main PWB (Without SDF)	7-2	P/J8	To Fuser Thermistor RT1	7-4
CN123	On Main PWB (Without SDF)	7-2	P/J9	To Toner Cartridge	7-4
P/J6	To Fuser Heat Rod	7-4			
P/J7	To Fuser Jam Sensor	7-4			
P/J8	To Fuser Thermistor RT1	7-4			

Plug / Jack Location Drawings

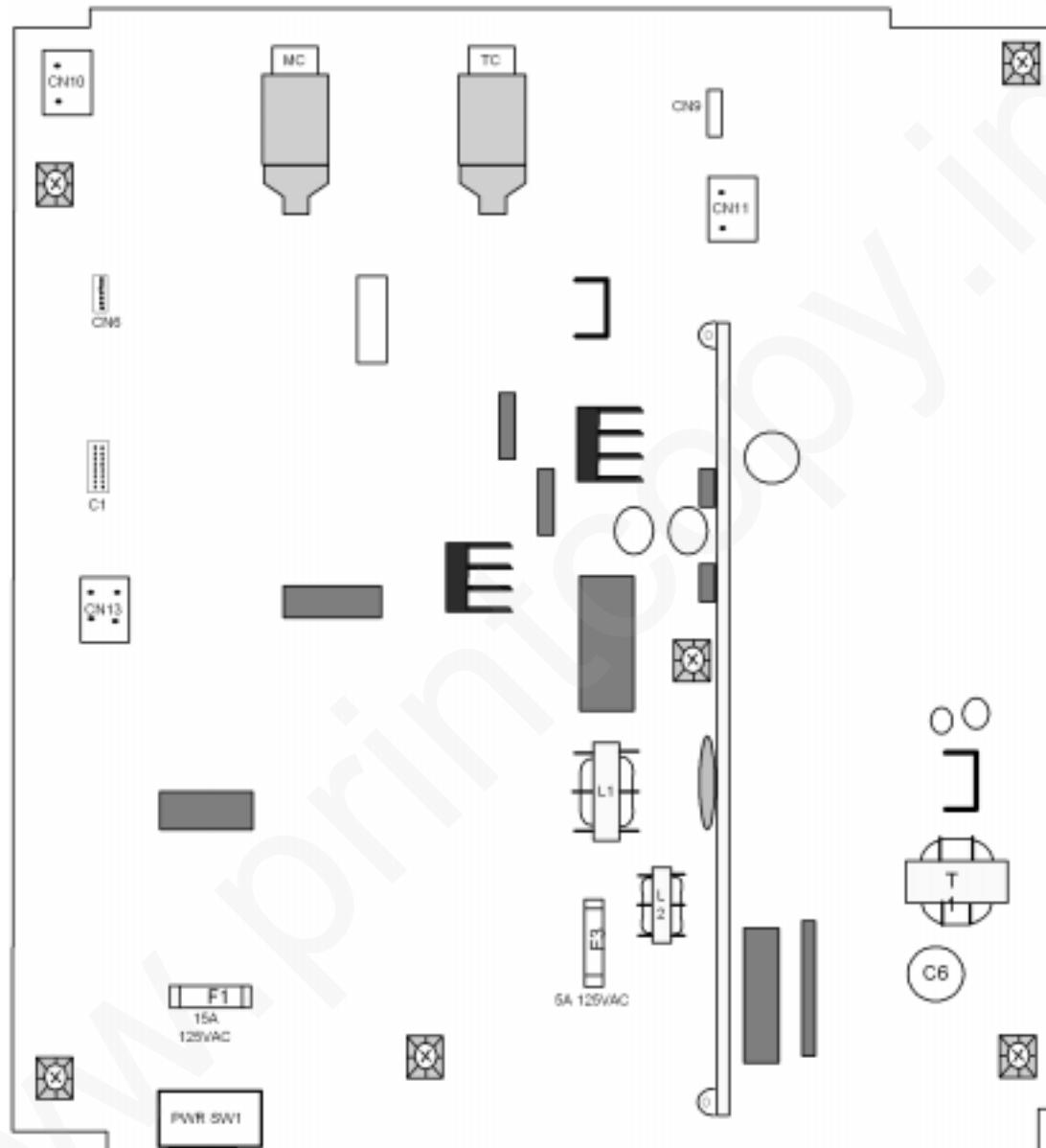


Figure 1 POWER SUPPLY PWB

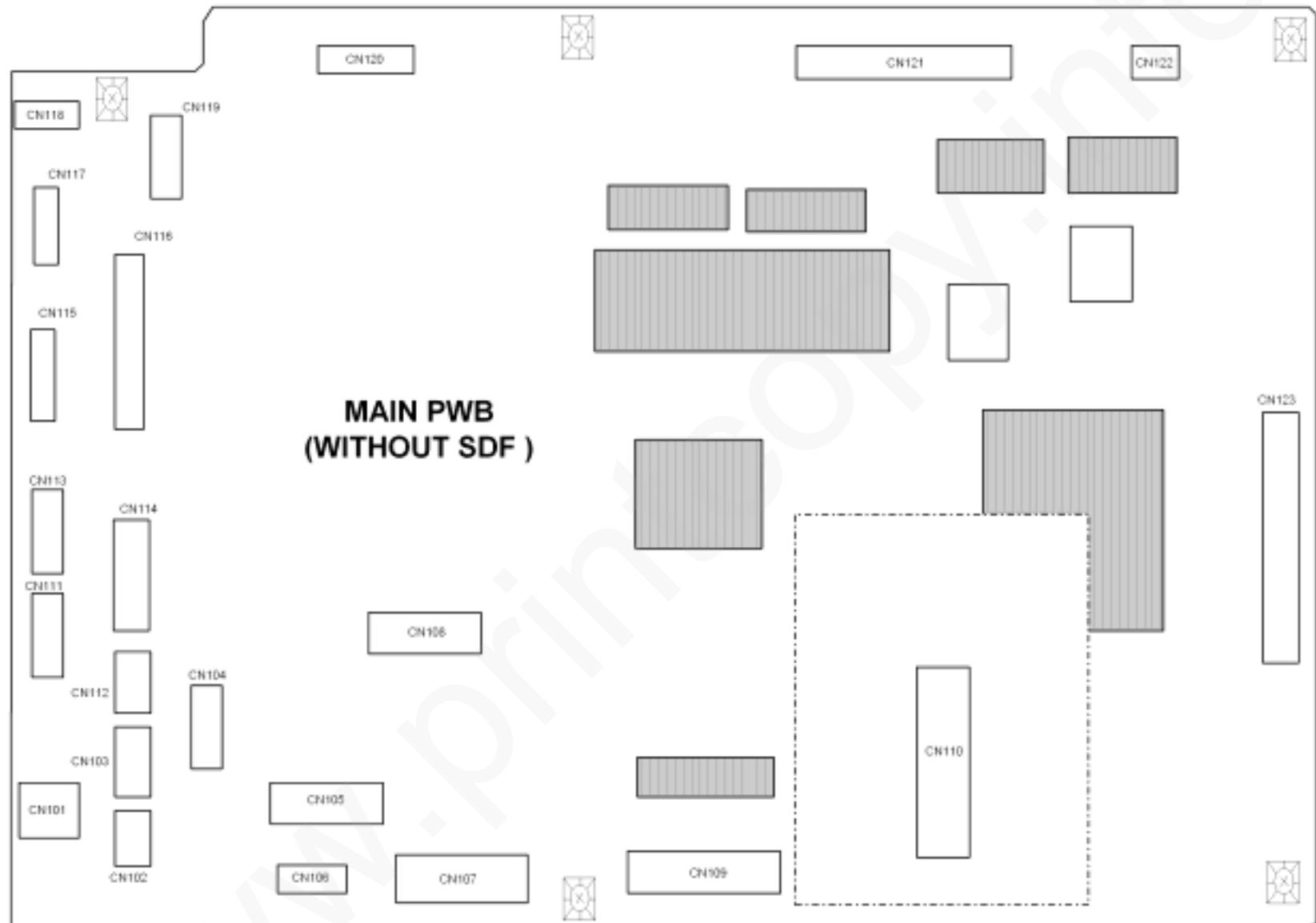


Figure 2 MAIN PWB (Without SDF)

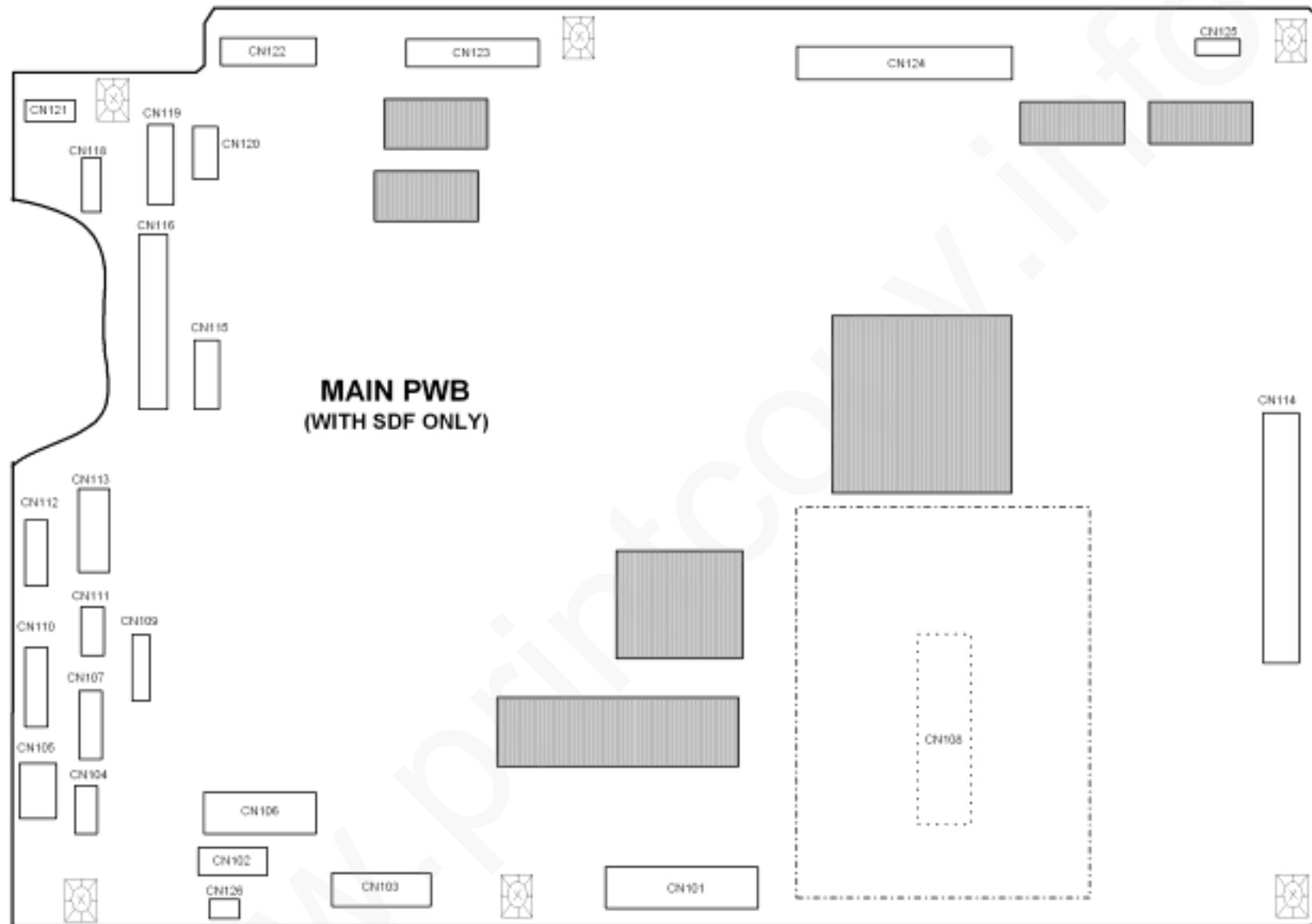


Figure 3 MAIN PWB (With SDF)

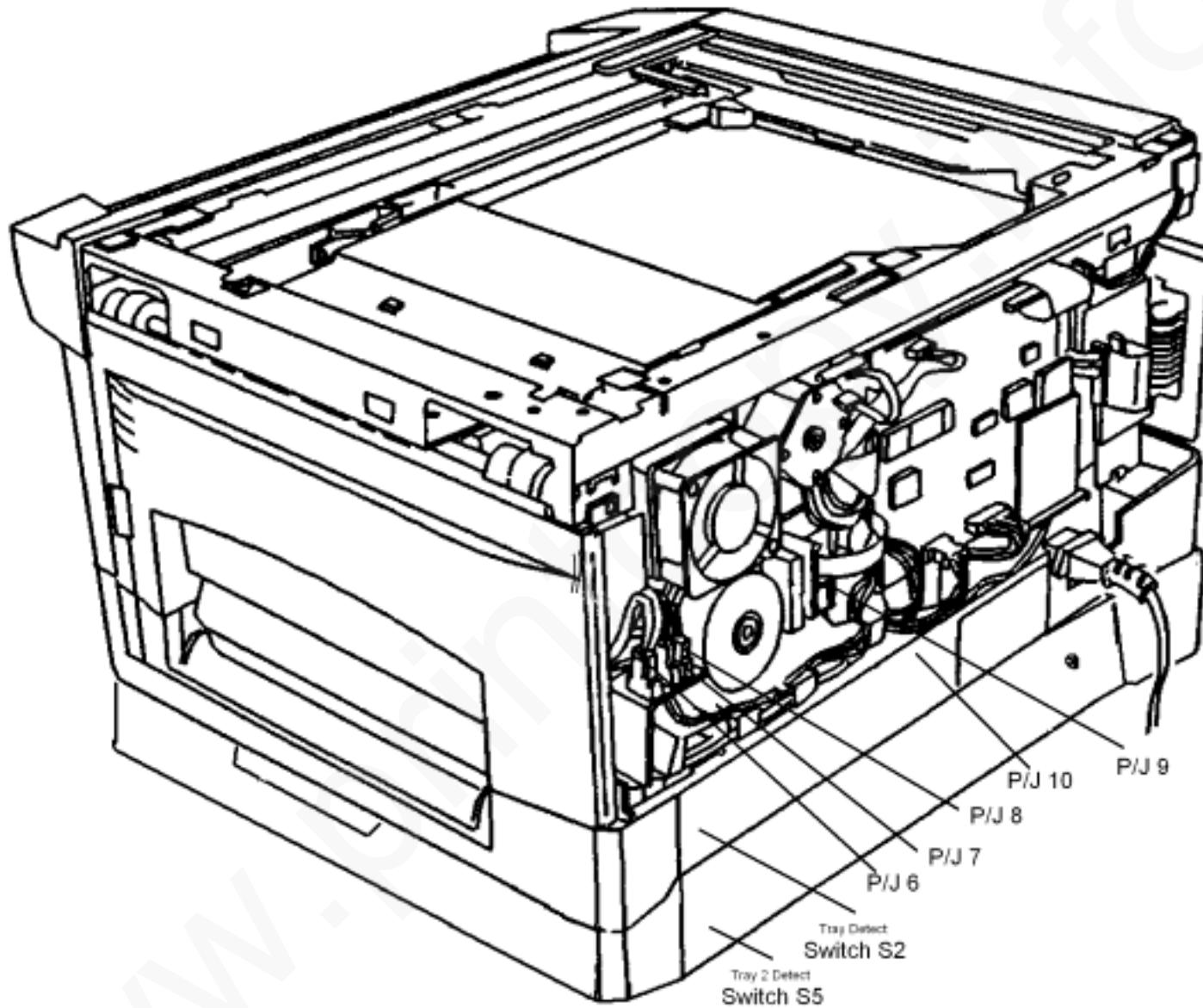


Figure 4 Machine P/J Locations

Block Schematic Diagrams

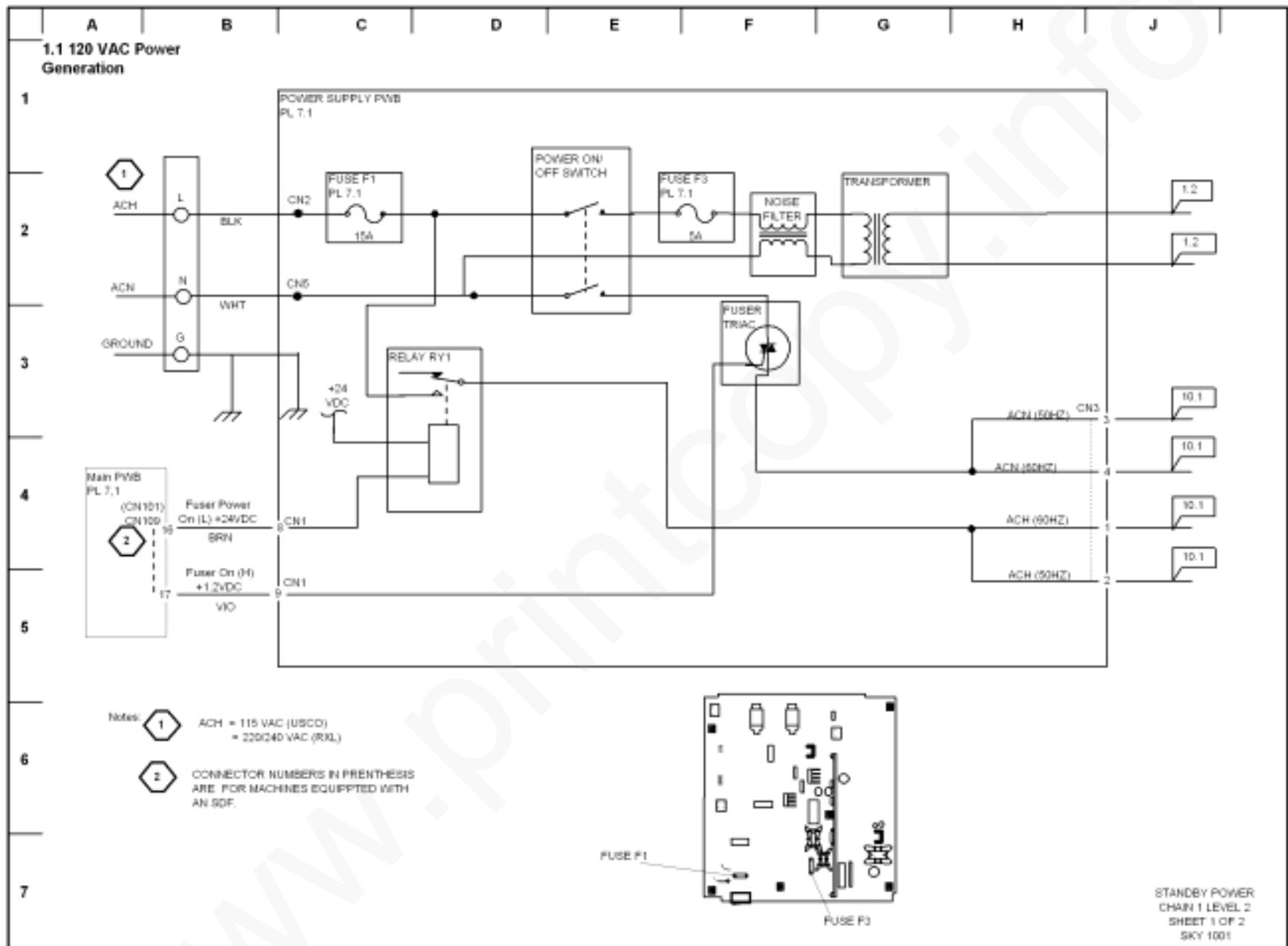


Figure 1 1.1 Power Ge3eration

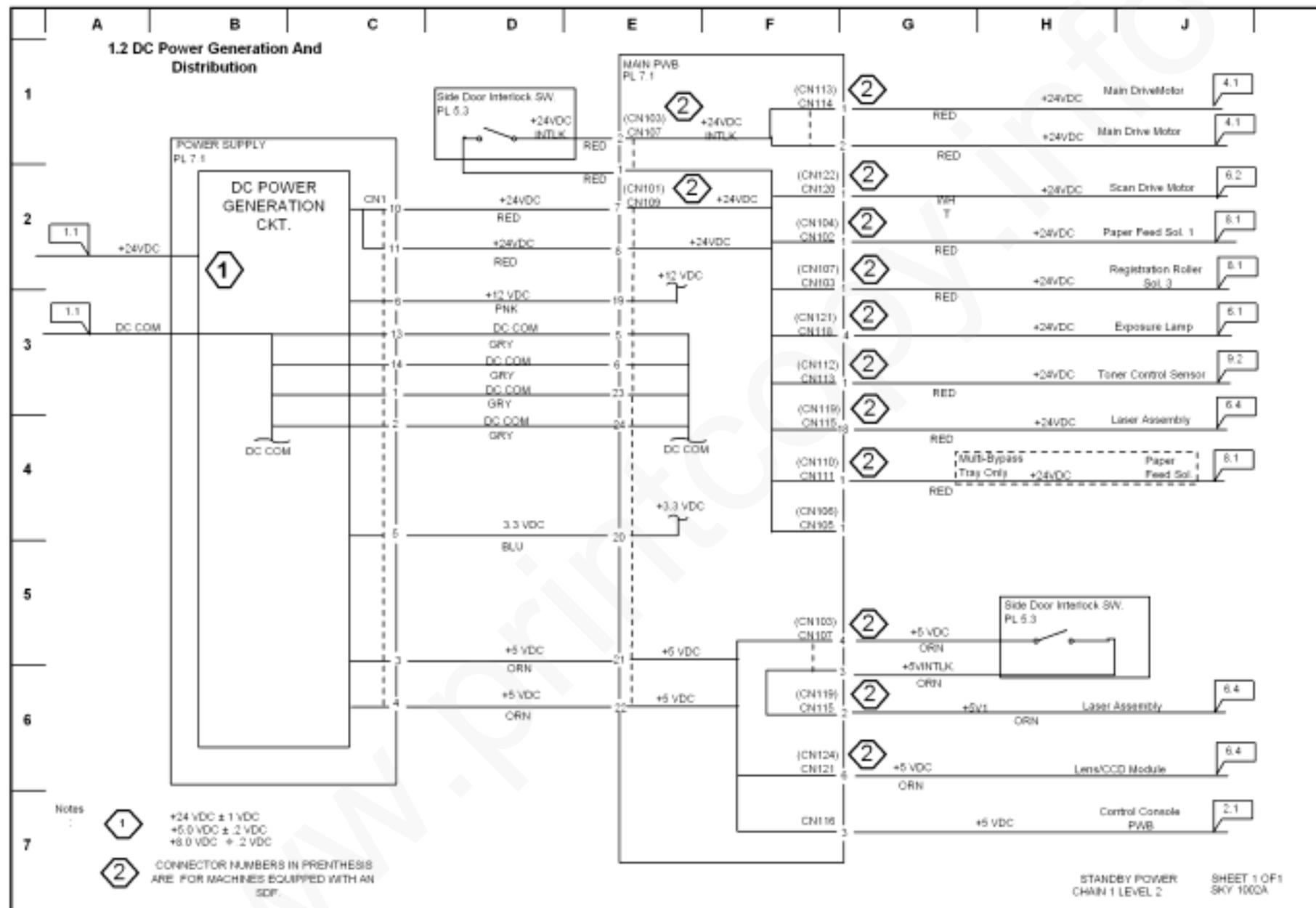


Figure 2 1.2 Power generation and distribution

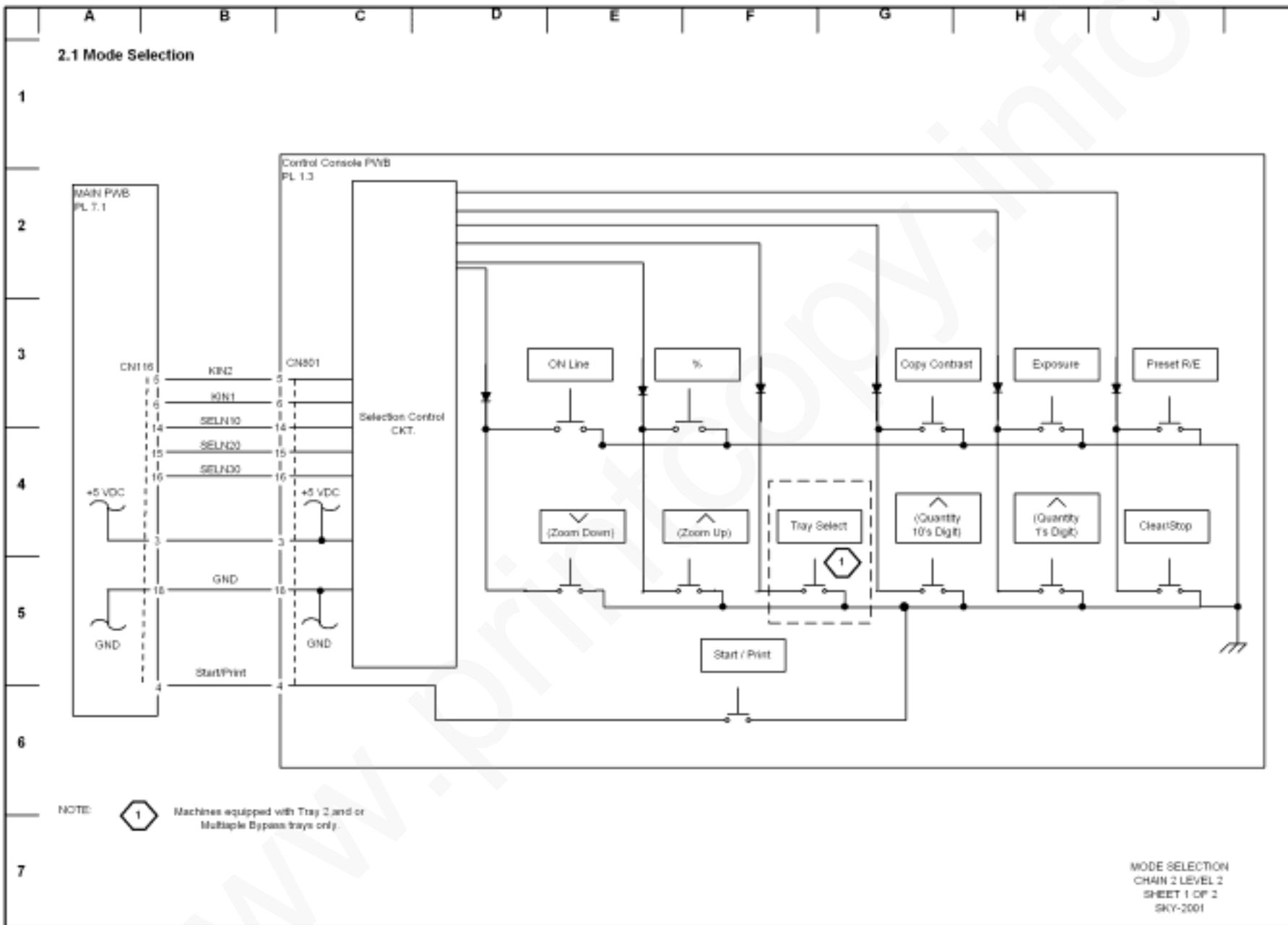


Figure 3 Mode Selection

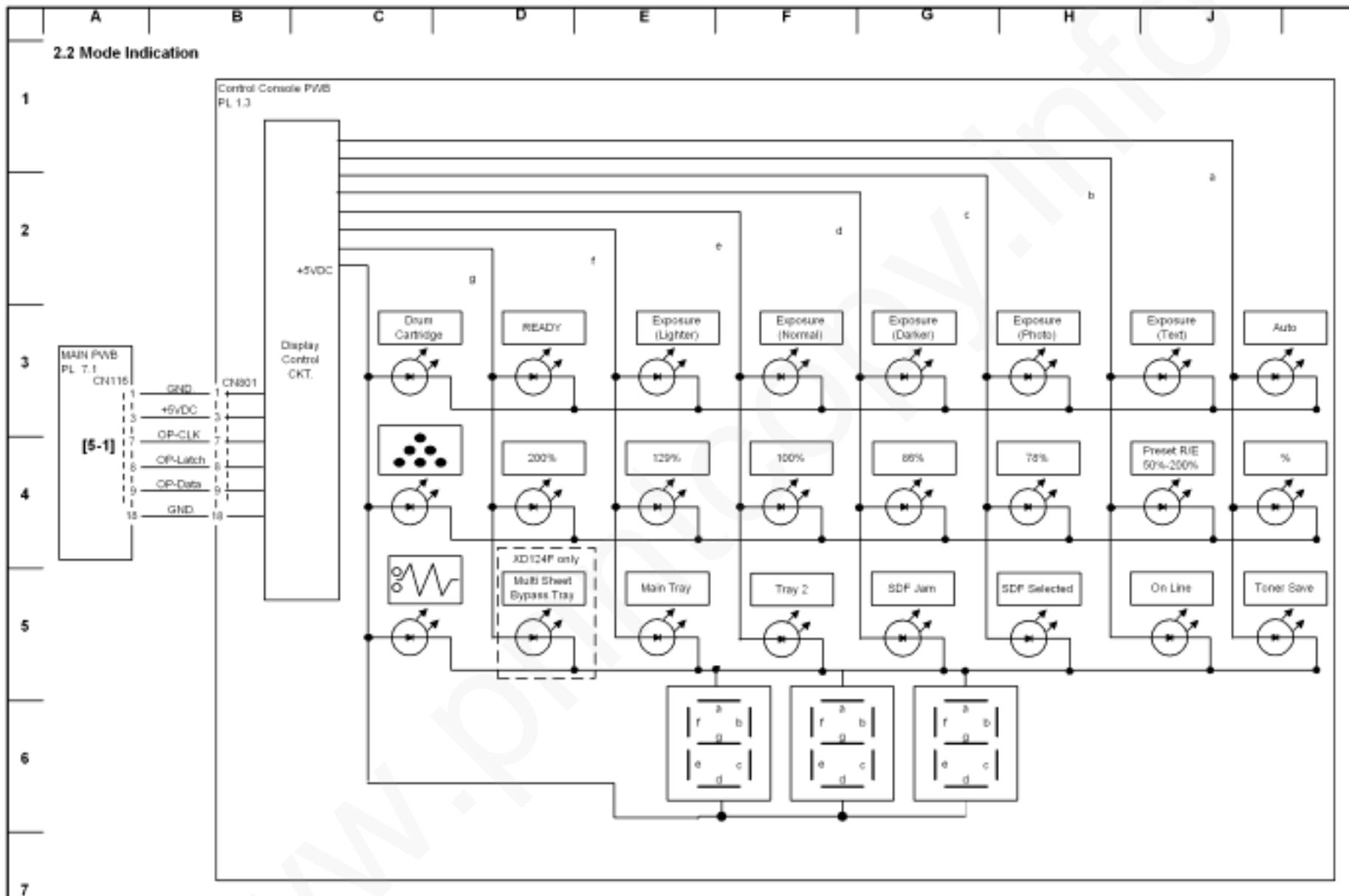


Figure 4 2.2 Mode Indication

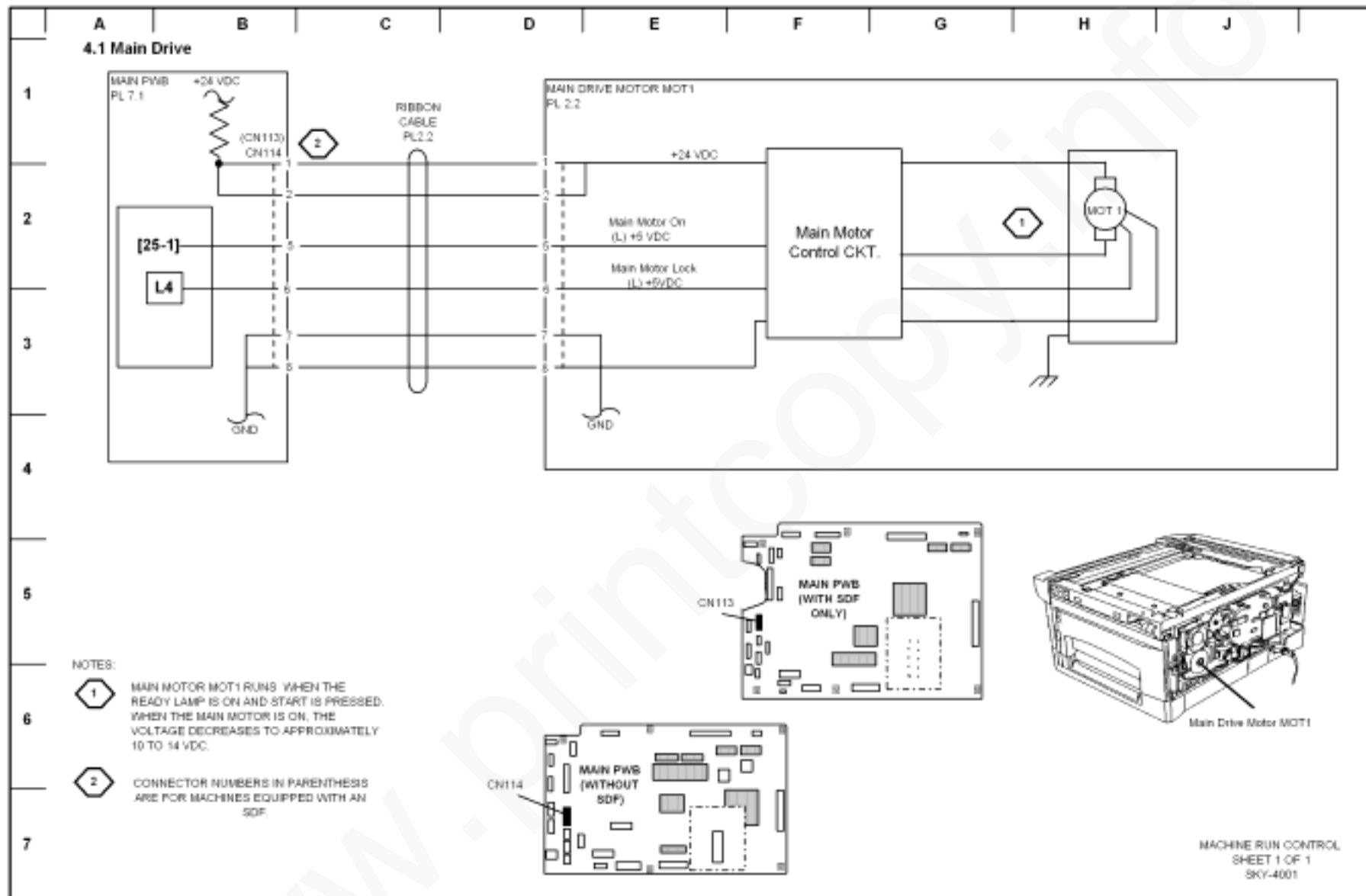


Figure 5 Main Drive Motor

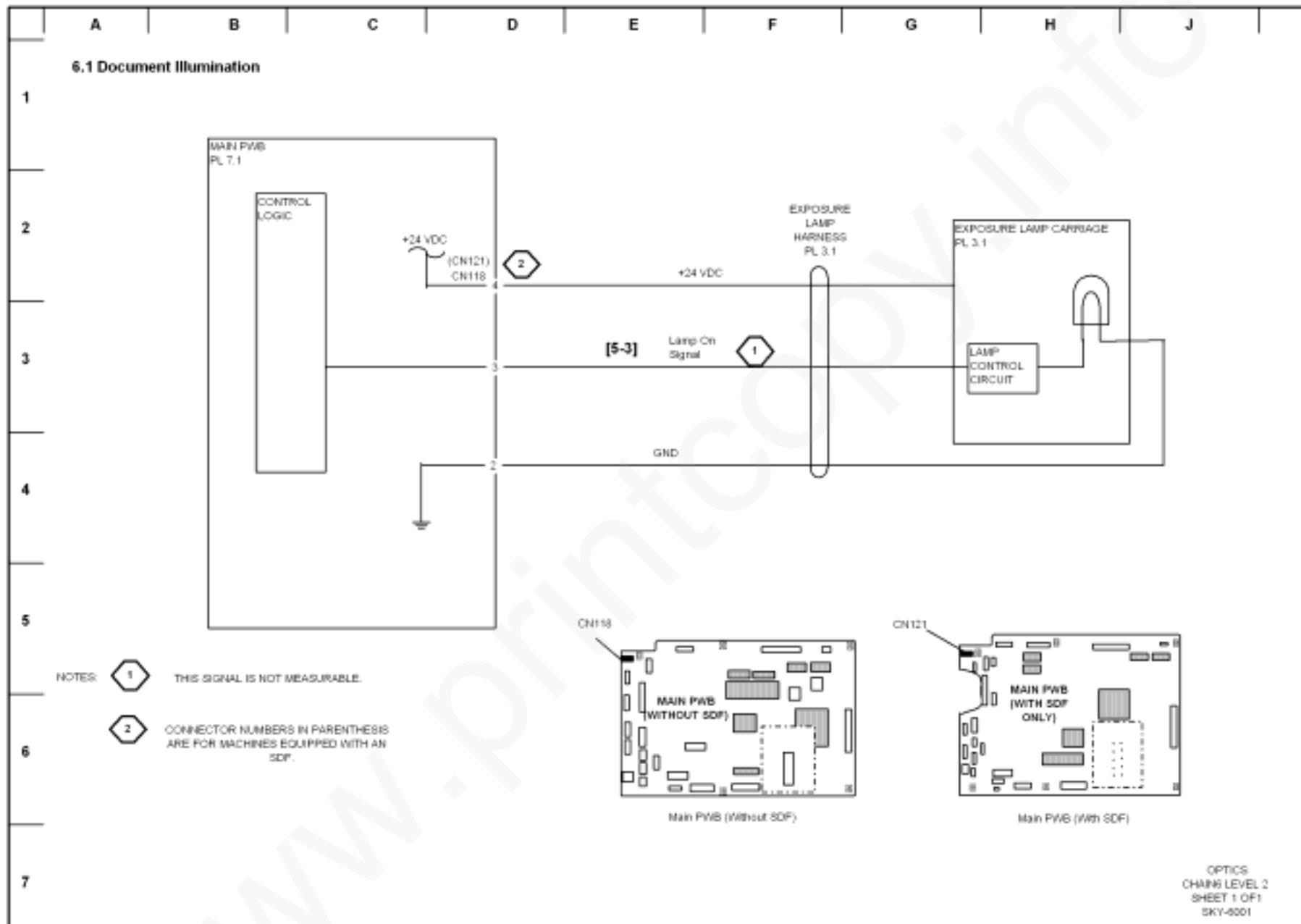


Figure 6 Documentation Illumination

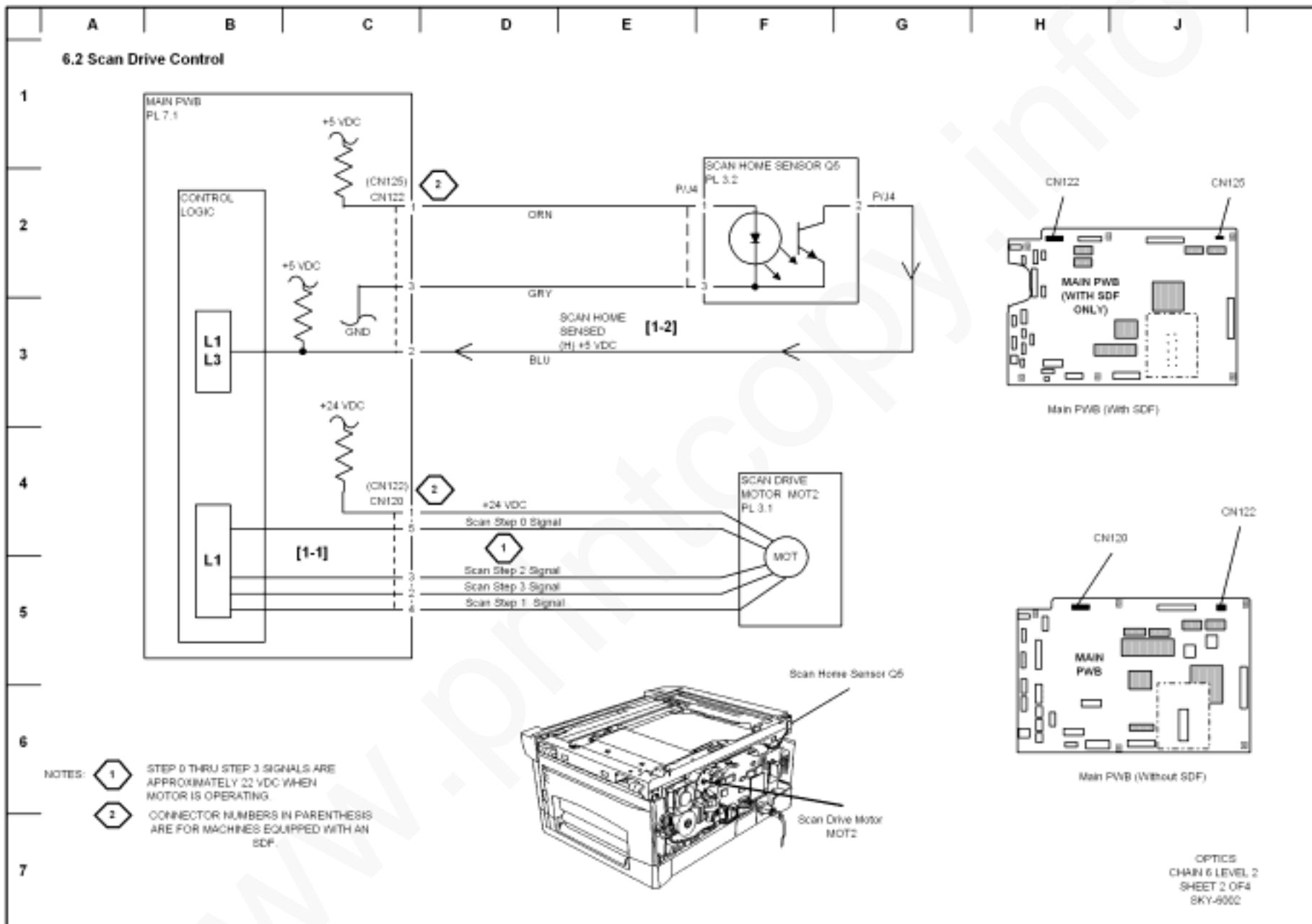


Figure 7 6.2 Scan Drive Control

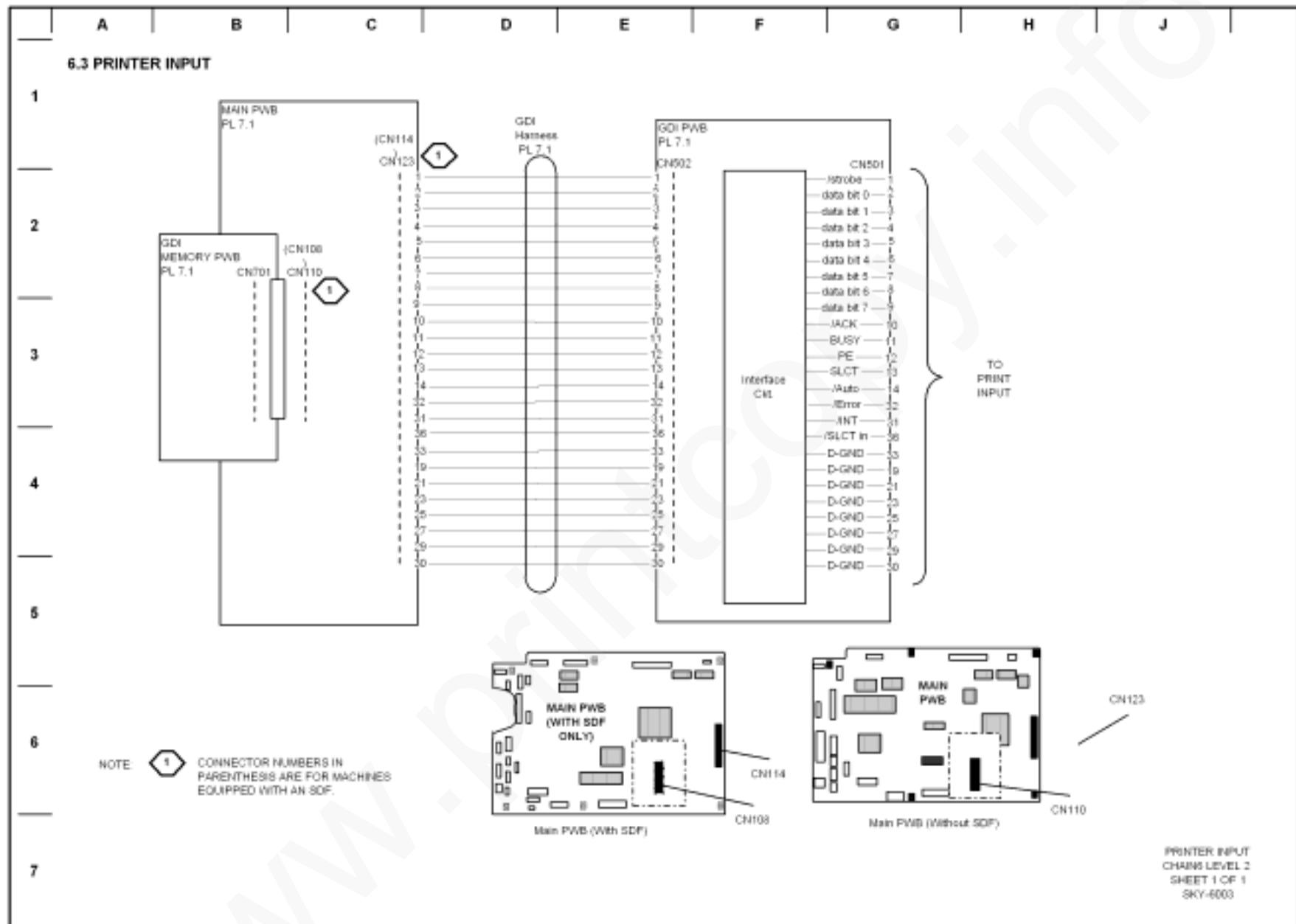


Figure 8 6.3 Printer Input

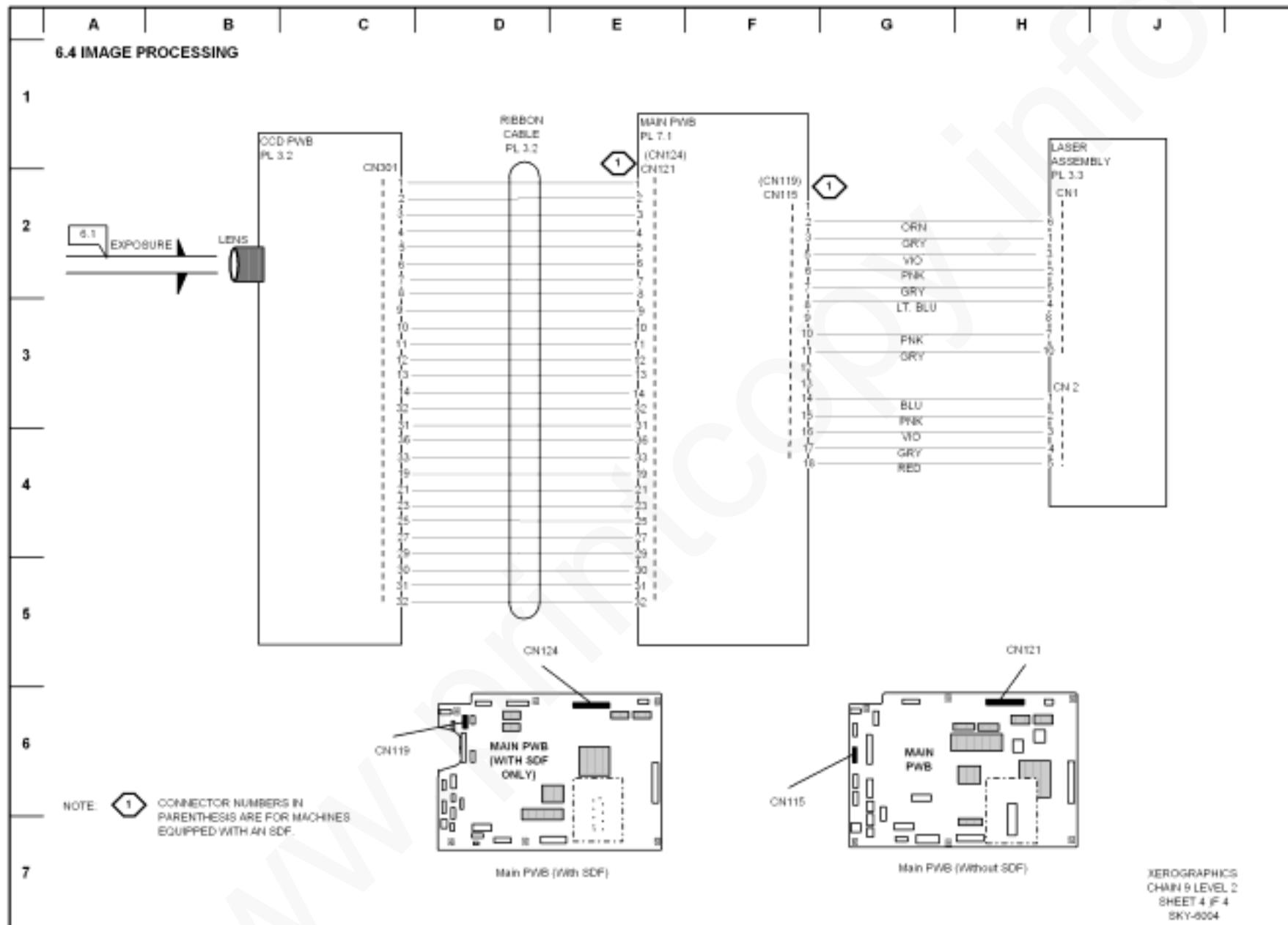


Figure 9 6.4 Image Processing

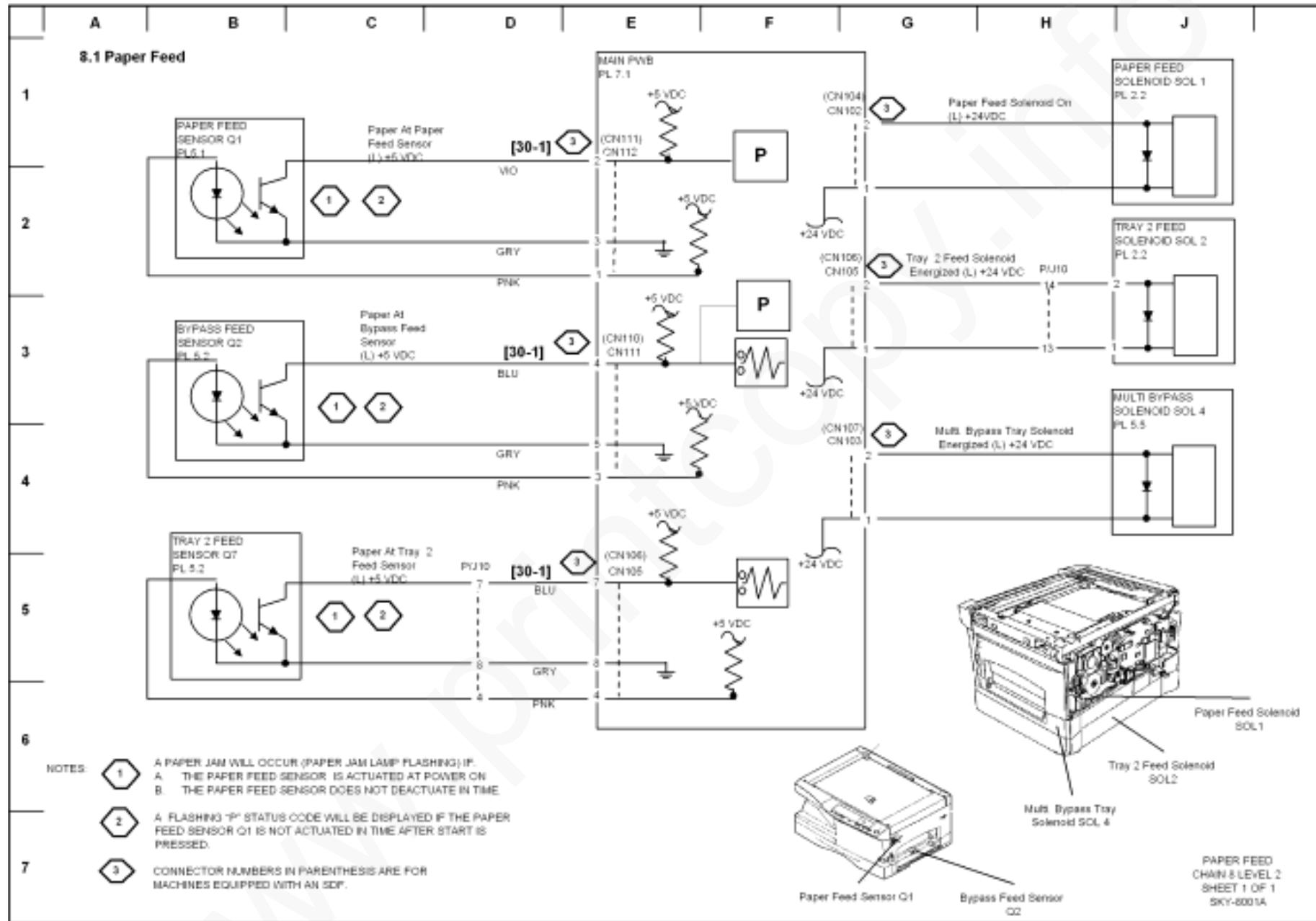


Figure 10.8.1 Paper Feed

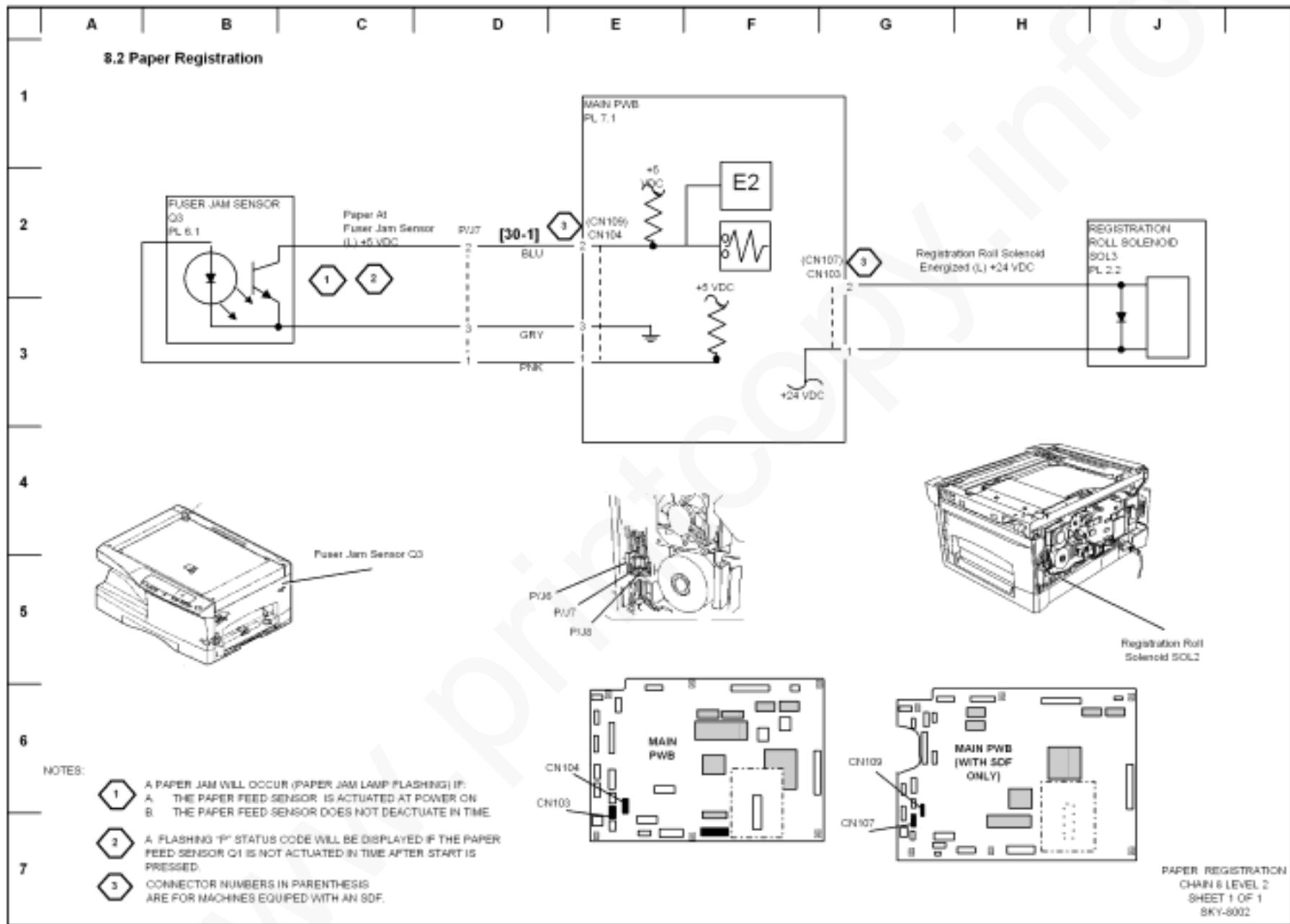


Figure 11 8.2 Paper Registration

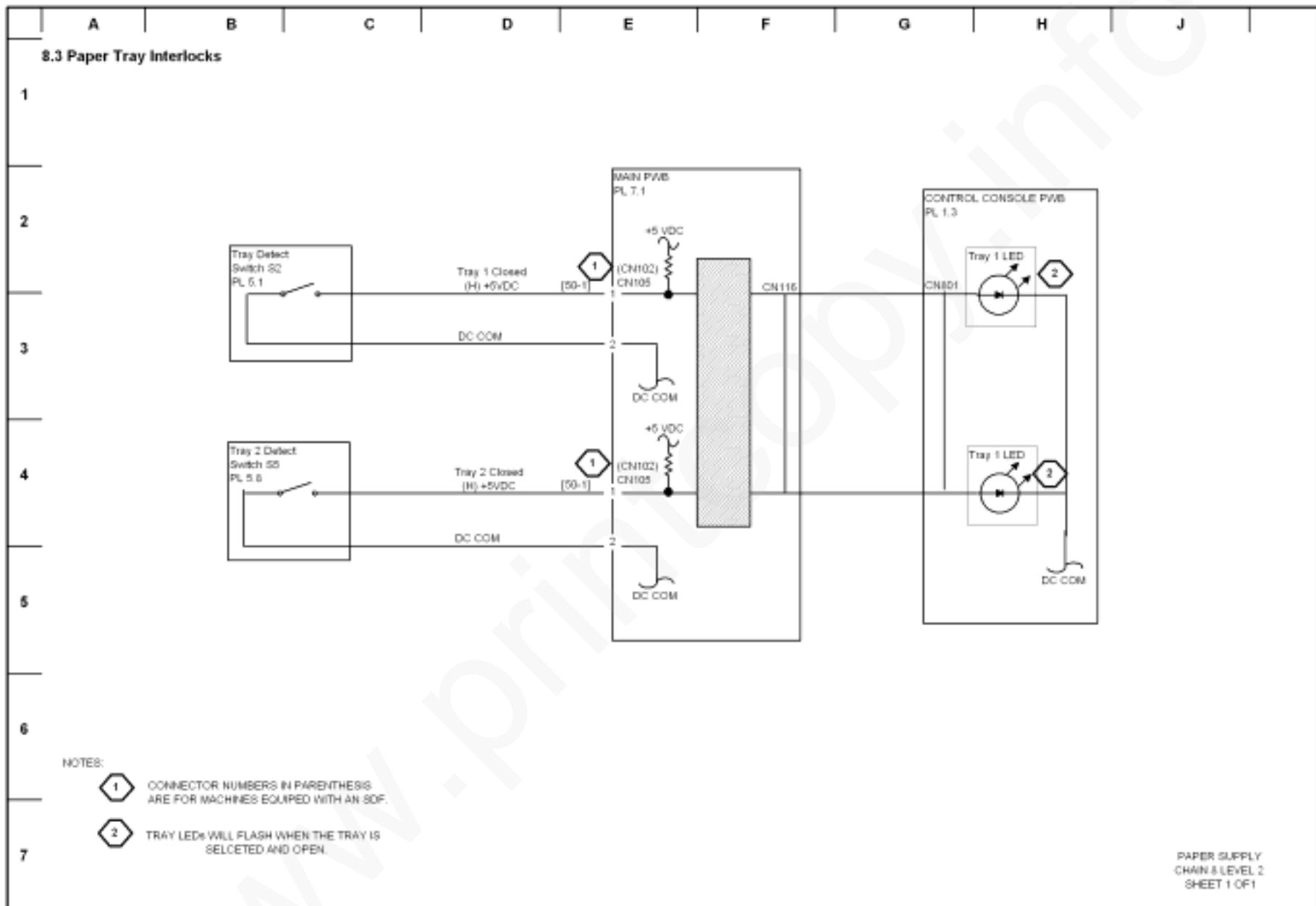


Figure 12 8.3 Paper Tray Interlocks

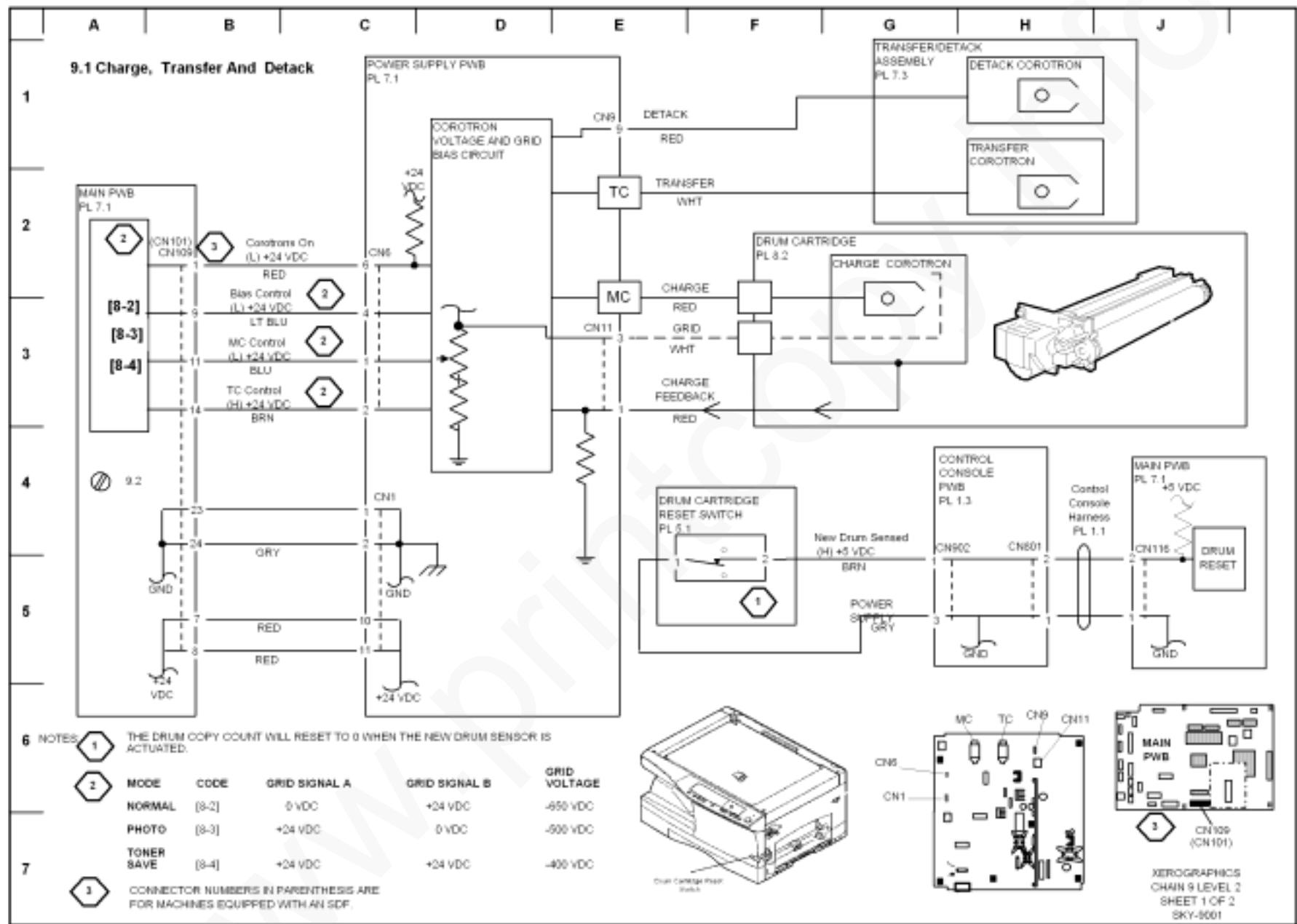


Figure 13 9.1 Charge, Transfer and Detack

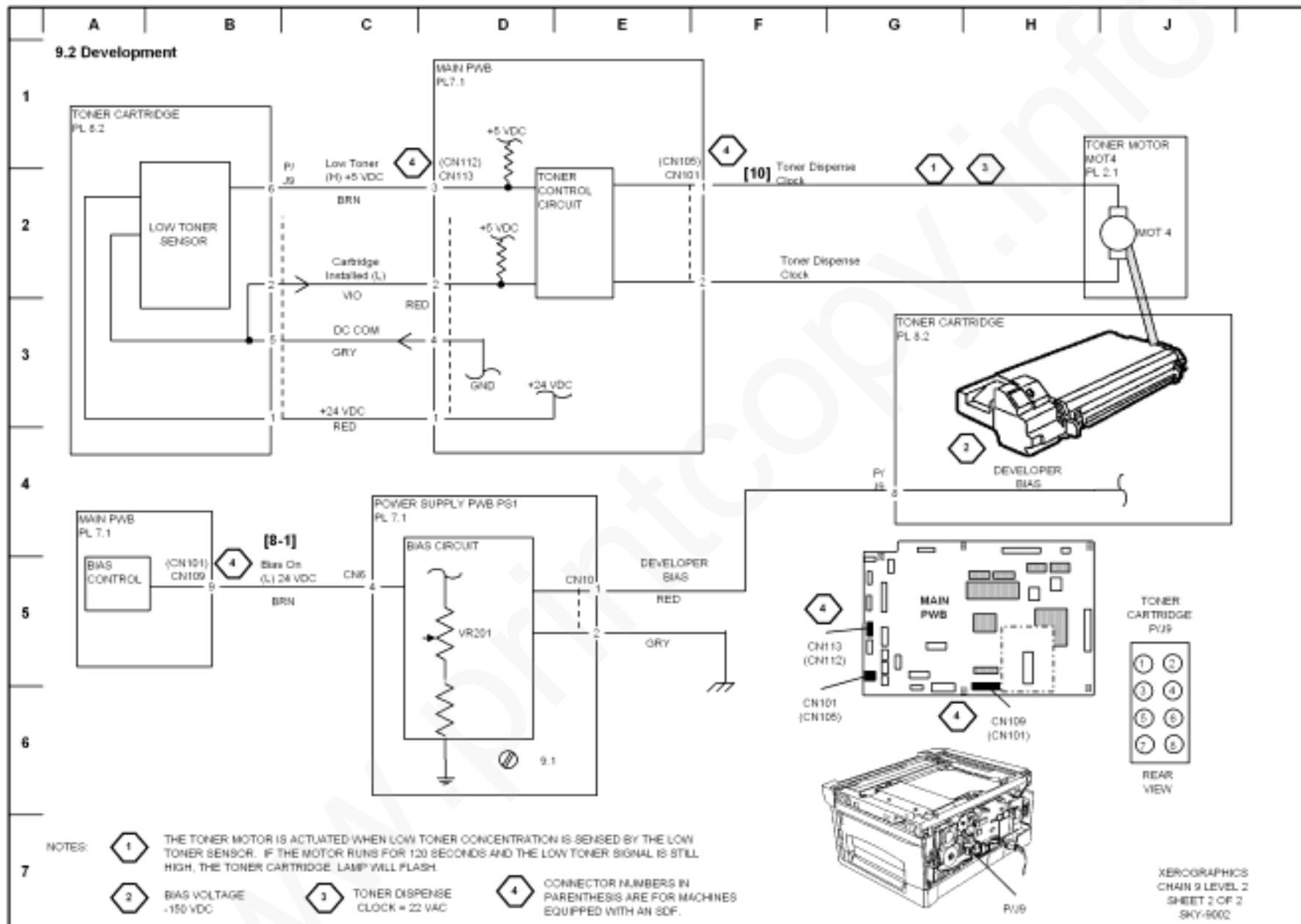


Figure 14 Development

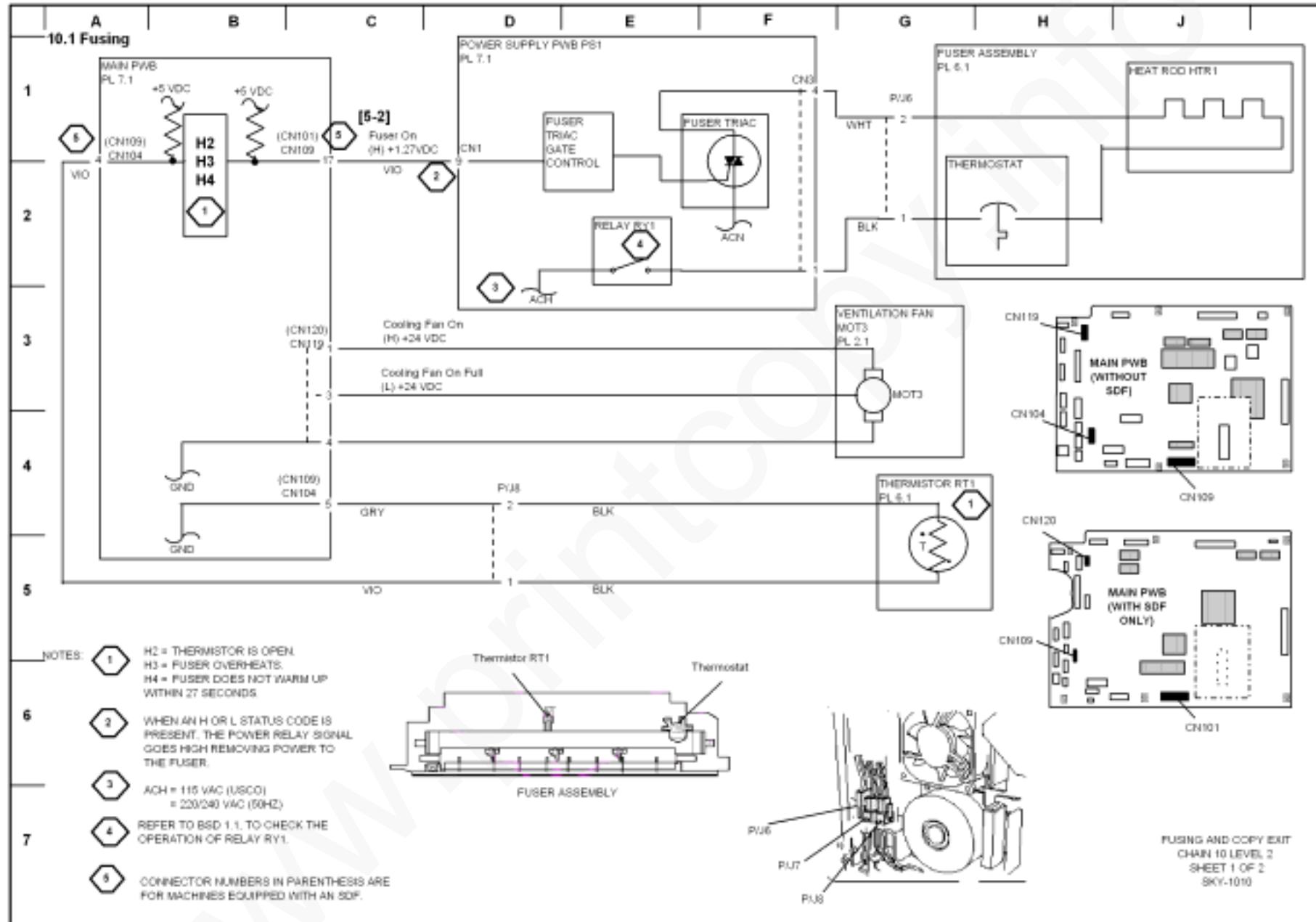


Figure 15 10.1 Fusing

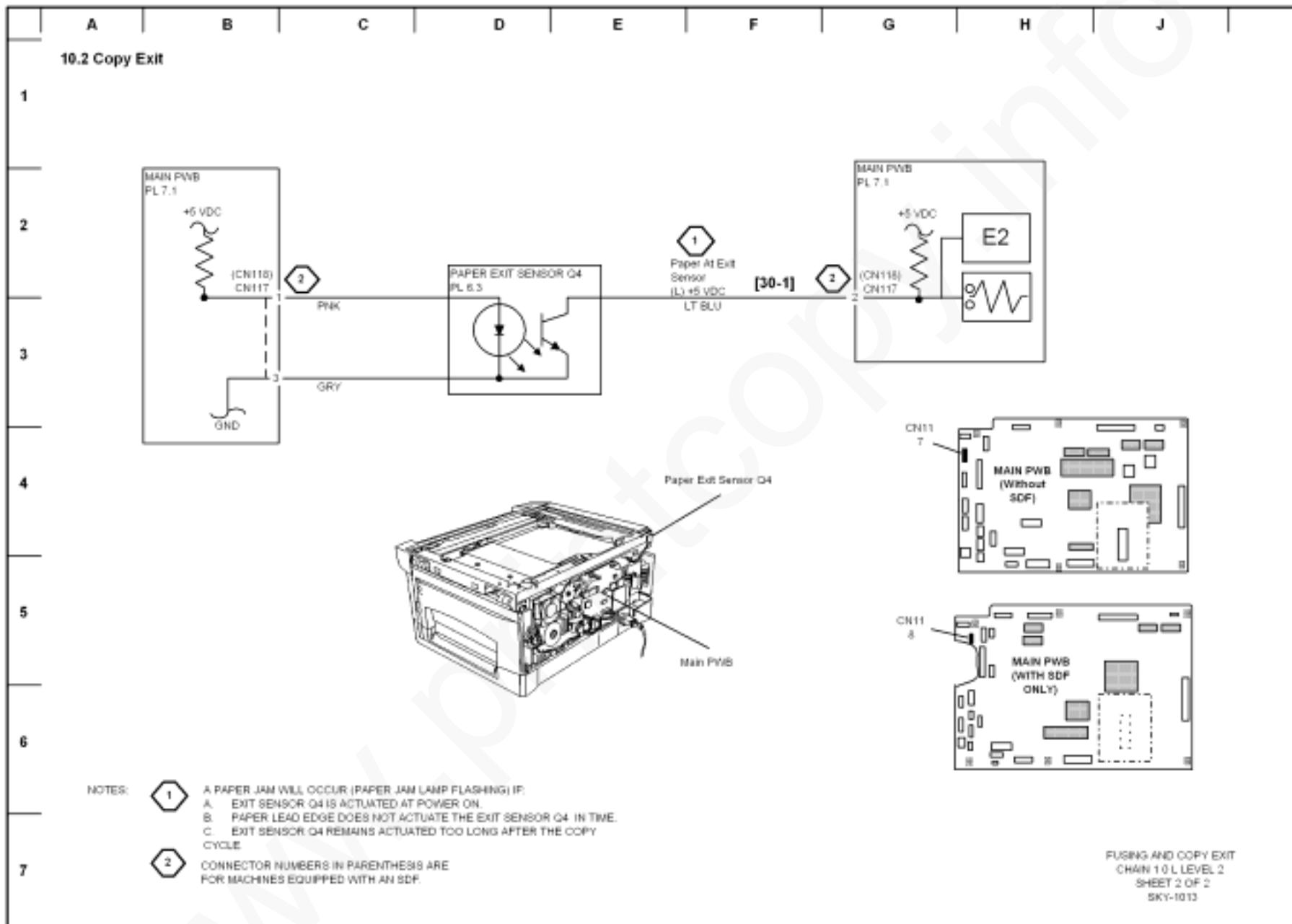


Figure 16 10.2 Copy Exit